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MAN IN INDIA

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MAN IN INDIA

VOL. 34 } JAN.- MARCH 1954 { NO. 1

INTERPERSONAL RELATIONS BETWEEN FIJI INDIAN KIN

By ADRIAN C. MAYER

Australian National University

I propose, in this paper, to describe certain aspects of interpersonal kin relations, as they exist in three rural settlements of Indians in Fiji. These were studied during a year's fieldwork as a Scholar of the Australian National University. First, I shall enumerate the main types of behaviour standardized between kinsfolk. Then I shall deal with these types in their relation to the settlement, showing how, by classificatory and fictitious extension of kin ties, behaviour can be regulated within a territorial settlement. Finally, I shall examine these interpersonal relations within the homestead, particularly in cases where there is division of a joint family, and where relationships have deviated from the recognized norm. Students of Indian sociology will note that the relations described are very similar to those existing in India; but there are also aspects which seem conditioned by the immigrant nature of the society, as I shall indicate in conclusion.¹

¹ Indians have been settled in Fiji since 1879. At present they number 148,882 of the Colony's total population of 312,678. Less than 10% are now India-born, 82% being Hindu and 14% Muslim. Men of North

Types of Interpersonal Relations

Four types of behaviour exist between kinsfolk. There is the relationship of avoidance, that of respect and a fair degree of distance, that of a respectful equality, and finally, that of a joking-relationship. For the most part, these relations exist both between persons of the same sex and those of opposite sexes. There is, however, a general difference between the former and the latter instance. Sexual differentiation is widespread in Fiji Indian society. Division of agricultural, household and ritual activities is made between sexes; at public occasions men and women are segregated, and in day-to-day existence there is little contact between all but the older women and those men who are outside the kin-group. It is therefore to be expected that the relationships to be described are more formal when they are cross-sexual, and are freer between persons of the same sex. Thus, stereotyped relations of friendship between, say, two brothers and two sisters are more informal than between a brother and a sister — though the latter tie may be more sincerely felt by any particular couple. I shall not make this sex distinction for each description of a relationship, but will take it as a 'given' feature.

The first relationship to be described, that of avoidance is reciprocal, and is confined, in its strict sense, to a man and his younger brother's wife (*chotki*). In joint households, where these two people lived in the same homestead, I often saw the *chotki* crossing the yard with her head-cloth pulled over that side of her face which might otherwise be visible to her elder brother-in-law (*barka*). These two never talked together, and the *chotki* tried to find someone else to serve food to the *barka*. Again, in one settlement, the local bus driver used to collect fares from all passengers. But his *chotkis*, when travelling,

Indian extraction are in the majority, people stemming from Tamil, Telugu and Malayalam speaking areas numbering perhaps 30% of the whole. There is almost no inter-marriage with Fijians or Europeans, and about 85% of Indians live in rural areas composed almost entirely of their own race. The settlements to be described are each about 1½ miles square, and contain roughly 500 people housed in homesteads scattered over the settlement's area.

would give their money to someone else to pay or, with averted heads, would leave the fare on the running board to be collected later by the driver.

The relationship cannot be fully considered without its reciprocal, that of the joking-relationship between a man and his elder brother's wife (*bhauji*). Here chaff is allowed and also a certain amount of physical contact ; at the Holi festival the two may splash each other with red dye and playfully push each other around. There appears to be an underlying sexual element in the relation, for jokes are made on the theme that the *bhauji* is the property of all the younger brothers-in-law (*dewar*), since marriage is permitted with a widowed *bhauji*. Some informants deny this aspect of the relationship, rather seeing in it a support to the pattern of family authority. The elder brother is the actual or potential leader of the joint family, they say, and must never be placed in a position where he would suffer accusations by a younger brother. If he were allowed free relations with his *chotki*, a situation might arise where a younger brother could reprimand him with reason, and consequent jealousy might rend the joint family. Hence there is the avoidance of the *chotki*. The freedom of men with their *bhauji* is quite permissible, because the younger brother can be disciplined by the elder if he becomes too free with his *bhauji*. Each argument, it seems, has weight and both the pattern of authority in the joint family and the existence of the levirate are concomitants of the relationship.

There is only one further relation which approaches that of avoidance, and this is between the parents of the married couple (*samdhi*). I was told that fluctuating attitudes of coolness and warmth exist between these couples, depending to some extent, of course, on the fortunes of the married pair. The relationship has potential difficulties—the dowry given by the girl's father at the wedding may not be deemed adequate by the groom's parents, or the bride's father may be angry over what he thinks is ill-treatment of his daughter at her new home. I shall show below that a man can play a part in the division of a joint family by influencing his son-in-law, and this is another reason why people like their *samdhi* to

live at a distance. A *de facto* avoidance may then exist, which might not be tenable were they to live closer together. It must be stressed that there is no institutionalized avoidance here, and it remains a matter for individual choice.

Respect is shown towards the ascending generation—maternal and paternal uncles and aunts, parents and parents-in-law and so forth. The younger will defer to the elder's opinions (at least in his presence), and will not have any over-familiar jokes or conversation with him. The relation is, of course, not reciprocal and varies. A more formal regard extends towards parents-in-law, the mother-in-law (*sas*) especially. The latter is determined to escape being under any obligation to her son-in-law (*damad*) and, among northerners, will not visit his home or, if she does, will bring her own food or will pay him in some way with a value over and above her requirements; this can be said to approach a relationship of avoidance. In contrast, uncles and aunts are treated in a more friendly manner, becoming more formal as the distance of the kin tie increases.

The father is also respected and obeyed, though family quarrels may weaken his position. The mother commands considerable authority in the home and, as I shall mention, plays a major part in the management and cohesion of the joint family by her authority over the daughters-in-law. When sons themselves become fathers and men with some power as founder of a family and a viable economic unit the grandparents will, unless they are exceptionally able, lose much of their authority and will retire into the background. They may act in advisory capacities, but if they are India-born may not have much influence for, as I shall show, there are differences in outlook between India-born and Fiji-born which detract from the prestige of the former, whether he be a grandfather or father. Men will have informal and friendly relations with their grandchildren and will frequently act as mediators and attempt to soften the punishment of the parents. The grandmother who, as the *sas*, has had complete power over her sons' wives (*vadhu*), will retire as they produce

children and themselves have daughters-in-law to do their bidding.²

All first generation ascendants are apparently treated with respect. There is no overt distinction, as occurs in some societies, between respect shown towards those who hold authority—in this case the father—and freer relations with others as a kind of reciprocal.³ This may partly be because there are often no ascendants other than the father. Indians came to Fiji largely as individuals, not in groups of kin, and where the father is India-born, no uncles exist in Fiji. On one occasion, it is true, an informant mentioned an especially intimate tie between a man and his mother's brother (*mama*) in distinction to more formal relations with other kinsfolk. But I was unable to obtain any support in evidence of this, other people saying that a *mama* was no nearer than any other uncle, and in fact often more formally approached, because he might live farther away than the father's brother (*kaka*), and was rarely met.

The third general relationship is the friendship between brothers, sisters or those—such as the cousin or the wife's sister's husband (*saru bhai*)—who are in the classificatory relation of siblings. The stereotype here is one of mutual friendship and confidence, at the same time allowing the younger to obey the elder if the occasion arises, as it does between brothers in the joint household. The two persons should support each other in quarrels with people outside the kin-group. They joke together, but without insulting behaviour or sexual content. Such ideas of the interpersonal relation do not, of course, preclude quarrels. A man will quarrel with anyone, whether he is supposed to respect him or not, if he considers that he has sufficient justification. Thus, in one settlement, disputes of a serious nature existed between brothers, and men and their maternal nephews. Again, in another

² These relations are given in terms of a patrilocal, joint family. The varied composition of rural homesteads makes these generalizations in some sense ideal ones, but they can nevertheless be applied to family groups of different composition.

³ For instance, see G. C. Homans, *The Human Group* (London, 1951), p. 258.

place, brothers had quarreled over the division of their father's assests. But the accepted norm, which is followed whenever interests permit, is one of help and friendship.

Finally, there is the joking-relationship, held reciprocally between a man and his wife's brother and sister (*sala* and *sali*), his sister's husband (*bahnai*), and his *bhauji*, or between a woman and her husband's younger brother and sister (*dewar* and *didai*), and her sister's husband (*bahnai*). These people can joke with familiarity, insulting each other in a friendly way by saying what a worthless person the other is, and so on. Many jokes have a hidden or overt sexual side. In general, the worst insults which can be offered are those alleging that a man has had incestuous connexions, or showing that his relatives are of easy virtue. An example of the former is to accuse a man of incest with mother or sister; of the second is the insult '*sala*' which means 'you are my wife's brother' and thus implies illicit connexions with the man's sister. Now, the only person to whom this latter epithet is not insulting is the genuine *sala*, and the joke exists because, made to anyone else, it could become a serious matter. The two brothers-in-law can also joke physically. They can push each other about and play practical jokes on each other with impunity. At certain times, like the Holi festival, they wrestle and throw red dye at each other in a way which is not permitted to others. A man can also joke with his *sali* and can play, though more gently, with her and his *bhauji*—he might pull their plaits, for example.

Interpersonal Relations and the Settlement

The relationships I have described can be seen in two ways. First, if attention is focussed on the settlement, we can see that they help standardize behaviour between the inhabitants. All classificatory kinsmen partake of the relationships, and so do what I shall call 'assumed' kin. The latter are people who have no actual kin ties, being of another caste or religion.⁴

⁴ Three major socio-religious groups—northern and southern Hindus and Muslims—are almost entirely endogamous. Within the two former groups there is a preferred caste endogamy, but lack of available caste mates and economic and other considerations may override this desire.

but who are recognized as kin through their co-residence and aid in co-operative activities. In the first case, the stereotyped behaviour is simply extended along classificatory lines within the extended kin-groups existing in settlements. A man, for example, behaves to his *sala* and his father's brothers' sons' *sala* in the same way. He may joke with some people of the settlement, and must be more formal with others.

The situation differs in the second case, when a man does not have any such kin tie, perhaps coming from considerable distance or from another island in the Colony. At first, said an informant, he will have firm ties with no one in the settlement. Then, when the inhabitants have sized him up and have, as it were, approved his tacit application for membership in their group, he will start to call several men of his own age, though not necessarily of his own caste or religion, as 'brother'.⁵ From that relation will spring the remainder of assumed kin ties, for his 'brother's' *sala*, real or assumed, will then become his *sala*, and so on as far as is desired.

As an example of this process, a newcomer arrived in a settlement having no kin ties there. After a little while, a man of different caste, with whom he had become friendly made him his younger brother, to replace a brother who had died. The newcomer thereupon treated the man's sister's husband jokingly, and his brother as a brother. But his son was not treated as a nephew (classificatory son), for he and the newcomer were of about the same age, and they called each other by name instead. The assumed ties do not, therefore, extend to the entire kin-group, but only as far as is convenient. Again, for instance, the same newcomer—a Hindu—became brothers with a Muslim of the settlement; but the Muslim's brothers were not treated by the newcomer as brothers. Instead they were paid the same respect due to men with whom no real or assumed kin relationship is established. Some people in a settlement will interact in this latter way. It may be because an

⁵ It is in theory possible that he might enter into some other first relationship. But I was never told of such a case, and heard only of the initial 'brother' tie. This, presumably, is the easiest to assume, being the tie of greatest informality and friendship with contemporaries.

assumed relationship would be incompatible with the relation of their ages and statuses, or it may be when they live far from each other and have little social contact and few obligations towards each other. It is my experience, however, that such relationships are in a small minority in settlements.

At any given moment, then, most of the people in a settlement will be joined by real or assumed kin ties, the latter sometimes reaching back to the days of immigration when all shipmates were brothers (*jahazi bhai*). People are quite aware of the advantages which stem from these patterns of interpersonal relations between kin, and say that they lessen the chance of quarrels. Without them, behaviour would be a matter of individual temperament and momentary changes; with them there is a standard of action to be followed more or less closely. People can count on the behaviour they are expected to express, and misunderstanding may thus be avoided.

Interpersonal Relations and the Homestead

Second, after noting the role of interpersonal relations between kin in the settlement, we can focus our view on the smaller scale of interaction within this area. Here we take the homestead as our unit since, as I have noted, settlements are composed of such scattered homesteads. Of the 196 homesteads studied, 50 were composed of joint households (i. e. with more than one adult male worker and a common budget and kitchen) and 124 contained elementary households (a single adult male worker). 562 people lived in the former, as against 767 in the latter category.⁶ Interpersonal relations are of obvious relevance in joint households. In those which do not divide, presumably, the relationships of the inhabitants correspond more closely to the stereotypes I have given. That is, the father or older man has control of the budget and other common activities, and is accorded due respect, the siblings co-operate and so forth. But on the occasion of splits we can

⁶ The remaining 22 homesteads (and 320 people) contained more than one elementary family, but with separate, rather than joint, management.

see divergencies from these patterns, and can better understand the latter.

I listed 13 divisions of joint families in two settlements studied. It was not easy to find out the main causes of division, and some of those set down below may be the superficial explanations of those concerned and of other informants. Nevertheless, there are, apparently, certain recurrent types of reason. One is that of jealousy between brothers or their wives.⁷ In one division, the reason given was that the four men concerned were earning unequally (one being carpenter in town, the others farmers and labourers), and so it was better to divide amicably than be forced to do so angrily later on. Again, a division had occurred where one brother grew vegetables, the other selling them in the market. The wife of the first felt that her husband was doing all the hard work and told her sister-in-law that he was no more than indentured to his brother—a dispute, and a division followed. In another homestead, comprising two married brothers and their India-born father, there had been ill-feeling for some time between the two wives, and a division nearly occurred whilst I was in the settlement. The elder brother was literate and physically weak. The younger was illiterate, and it was thus natural for the money to be handled by the former, who also went to market and made purchases for the entire household. But the younger of the two wives felt that her husband was being imposed upon, and did more than his share of the work. The two women took it in turns to cook and one day, when the elder would not give food to one of the younger's children, saying that it was bad to eat between meals, the younger made a scene, asserting that the elder had no right to say this, since her husband did nothing to earn the food.

⁷ As Srinivas remarks (M. N. Srinivas, 'A Joint Family Dispute in a Mysore Village,' *Journal of the M. S. University of Baroda*, Vol. I, 1952, p. 30), women are often blamed for quarrels which split the joint household, whereas rivalry or other tension between brothers may be equally important. In the examples given, the men may have had more share in the divisions than I was led to believe, the stereotype of co-operation between brothers being maintained by emphasizing women's responsibility for the divisions.

From then onwards, each woman cooked on her own fire, the children played separately, and though the two brothers talked together there was restraint between them.

Undoubtedly, there would have been a division, in spite of the efforts of intermediaries to patch things up, had it not been for the old father. He said that division was not the custom in India and that if he lived to see it in his own family in Fiji he would make a will and leave all his money to someone else, even to the Government if need be. Parental sanctions were in this case enforced and the division did not occur. Here, as well as in other instances of family disagreements, there are several factors supporting the application of such sanctions—the personalities of the men who apply them and the dissents upon whom they fall, the economic possibilities involved in either course of action, and sometimes public opinion. A man who is weak-minded, or who stands to gain economically by not dividing (as in the latter instance cited), or who values his social contacts in the settlement, will hesitate to disobey his seniors or the majority of his kin-group too flagrantly. But, if the factors of choice allow it, he will disobey and no strict sanctions—outcasting, for example—are enforceable to prevent a division.

Three divisions of the thirteen observed occurred for this reason of jealousy over unequal work and responsibility. More general economic factors were said to account for four others. Quarrels over boundary lines of fields informally divided amongst kinsmen may lead to a permanent breach; a dispute by sons over a father's will is another example. Finally, there appear to have been six divisions as a result of temperamental differences allied to attempts by the older men to control their sons too closely. In one case, a man said that his father had started criticizing his pattern of expense, saying that he, like other Fiji-born, had acquired needless extravagances, such as the desire for tinned food and manufactured cigarettes, instead of the 'country' type made of home-grown tobacco. In another case, the father had criticized his daughter-in-law, saying that, as she had been to school for

several years, she considered herself above hard work and also talked too freely to men other than her husband.

There are certain protagonists in all these divisions : the father and the mother, the parents-in-law, the sons and the daughters-in-law. We have seen how, in one case, the father prevented a division. This is exceptional, and it is usually the old mother who has this power. As it was said, the father cannot go into the kitchen and talk seriously to his son's wives, whereas the mother does so and has also had considerable power over them from the time of their marriages. Hence, the two largest families in one settlement divided only after the mother's death, and it was held that these splits would not have occurred if the old ladies had been alive. There is an opposite aspect to this, of course. When the mother is too dictatorial, a split may occur, given a daughter-in-law with influence over her husband, and often a father who can attract his son-in-law with offers of work or land. In this case, the mother may provoke divisions instead of preventing them. They may occur over issues described above, but behind these lies the antagonism of mother and daughter-in-law. A man in one place was said to have left the household because his father and mother kept on complaining about the wife's cooking, how it was not tasty enough and below Indian standards. On the division, the man went to his father-in-law's place (*sassural*) and worked there, and the fact that this was possible for him may have influenced the division.

A similar situation may arise where there are no parents, but instead two brothers. Here the elder brother's wife may take the place of the authoritarian mother, and quarrels may ensue. The elder brother cannot mediate since, as I have pointed out, he cannot talk freely to his *chotki*, and the younger brother will take his wife's side. It is largely to avoid this sort of situation that men commend the marriage of two brothers to a pair of sisters. There are 10 such matches in the settlements studied, but the force of this reason is vitiated by the fact that only 2 of these pairs are still living jointly, 4 of the remainder being in the same, and 4 in separate, settlements.

A further factor which I have mentioned is the attitude of

the father-in-law (*sassur*). He may not like to see his daughter working so hard for others—for the newest wife of the joint household shoulders the main burden of the household chores. He may also wish to have another man to help him in his own work, or to live near him and provide support in times of need. The *sassur* may therefore start to entice his son-in-law away from his own house on any of these counts and, if successful, will force a division of the latter's household. This point is illustrated by the Table below which shows that, though the majority of men are either patrilocally settled or related to cognates in their settlements, there is a proportion (15.3%) linked to their neighbours primarily by affinal ties, and sometimes living at their *sassural*. It is true that the latter are often looked down upon, as being unable to organize their own households, and as being hen-pecked by wife or *sas*.⁸ But there are enough men in this category to show that anyone can choose to live in this way, and that the *sassur*'s role in a joint family division may be a factor in a man's decision to change his residence.

Table 1.

Type ⁹	Number in Two Settlements
(a) Men with cognates in Fiji who are living at the <i>sassural</i>	9
(b) Men with cognates in Fiji who are living near affines, though not at their <i>sassural</i>	9
(c) Men with no cognates in Fiji, who are living near affines, or at their <i>sassural</i>	10
Total	28
Total adult males	183

* There does not appear to be a relation of overt teasing of such men by members of the wife's kin-group, as noted by T. B. Naik for India. (See 'Joking Relationships', *Man in India*, Vol. XXVII, No. 3, p. 250-66.)

* Because there are intra-settlement marriages, even those living with close cognates are also linked to affines in the same settlement. The men

It is clear from these examples that the stereotypes of parental authority and fraternal co-operation can be influenced by jealousies and rivalries, more easily developed in a joint than a simple household, which will overrule the 'correct' interpersonal relations between these kin. Similarly, relations between *samdhi*, which should be friendly, even though distant, may become extremely strained over incidents in the joint family's history. Nevertheless, the fact that one-third of the population is jointly organized (though some joint families last for only a year or two after the son's marriage) indicates that interpersonal relations of respect and co-operation, though modifiable, retain some importance in the setting of the joint household.

Conclusion

My material contains three main factors of interest to students of overseas Indian communities. The first concerns the position of age in the relationships described. It is clear that in many of them there is the principle that age commands respect.¹⁰ But in actual practice, the principle is at present weakened by the immigrant origins of the community. For there is a different outlook held by India-born and Fiji-born, which in many households corresponds to the age division. Sometimes, we have seen, the India-born father can successfully assert his authority. But on other occasions the difference in values merely provides grounds for a division. Old men who wish to save money, for example, perhaps recalling the times of scarcity in India, fall out with their freer-spending Fiji-born offsprings. When the latter are financially independent, the older men will not be able to uphold the pattern of control by the ascending generation.

It must be noted, at the same time, that the India-born

listed in this Table are those who lived in settlements where affinal ties are the most important, if not the only links they possess. The men of category (c) are mostly India-born who came to Fiji without cognates, and who do not live near descendants.

¹⁰ For evidence of the same principle in India, see for example, J. Sarma, 'Formal and Informal Relations in the Hindu Joint Household of Bengal,' *Man in India*, Vol. XXXI, No. 2.

number less than 10% of the rural settlements' population, and that they will have disappeared after a few more years. Whether the emergence of the Fiji-born as the entire category of the older men will restore to age the authority enshrined in interpersonal stereotypes, or whether the earning power and occupational mobility of sons will make them increasingly independent of older men are possibilities to be noted. The former might strengthen the joint household organization, by making stronger the power of its head, though I shall note below the feeling against joint households. There would also be greater influence exercised by the older men over their kinsmen in affairs outside the kin-group. This would, of course, be a factor in patterns of faction formation and associational activity; for changed interpersonal relations between those members of groups who are kinsmen could affect the constitutions of the groups themselves. Conversely, it is possible that the assumption of associational leadership by elder Fiji-born men could strengthen their position within the kin-group by the same overflow of authority.

The second factor is that these relations are explicitly recognized and their differences are clear. This might be thought unremarkable; but it has been significant in these settlements of immigrants. For, combined with the creation of assumed kin ties, it has meant that behaviour in settlements has been of a predictable nature, though often between people who were unrelated and differentiated by their various Indian cultural and regional backgrounds. It is worth noting that at present many groups in the settlement have fluctuating policies and variable numbers, whereas interpersonal relations have a more standardized mode of action. In future, the individual may act according to a group policy—that of his kin-group, an association or a faction. But, hitherto, interpersonal relations based on stereotyped behaviour between real and assumed kin have largely regulated interaction in the settlement.

Lastly, there is a difference of opinion over the value of the joint household which, again, tends to be correlated with the distinction of India-born and Fiji-born. One old India-born

summed up four advantages of the joint household. First, the economy which it represents—'it takes only one match to light a fire for a big or small family', he said : second, the anxieties of management are placed on one pair of shoulders, and other members can rest easily : third, there is no incentive for work and improvement of a man's position if, when he is old, his large house remains empty and his money is only desired after his death : last, a divided house can give its members little protection in fights and quarrels. The younger Fiji-born admit these points, and may stay with the older men, at least for a few years after marriage, as we have seen. But they also like to manage their own affairs, and maintain that the chances of dispute are fewer if each man makes his own decisions as head of a simple household. And young men, when they are economically independent of their fathers, regard it as their right to divide if they so wish.

A trend towards the preferability of the separate simple household would mean that joint families of any long existence will become increasingly rare. A concomitant of such a development would be the loosening of obligations towards kinsfolk, for people tend only to feel strong ties of kinship and responsibility to those with whom they are in close and continued contact. Such a general loosening of kin ties might, in turn, mean that the various stereotyped interpersonal relations based on these ties would weaken. The material cited shows that norms of interpersonal behaviour may be over-ridden in cases of household division, in favour of courses of action decided by individuals. Further, interpersonal relations would become more uniform. If a man had equally little contact with father, uncle and *sassar*, his behaviour towards them all would tend to become equivalent. My analysis has indicated that this is not so at present, however, and interpersonal relations between kin have not yet lost their significance as stereotypes of differential social behaviour.

MICROLITHIC INDUSTRY OF BONGARA, MANBHUM*

By GAUTAM SANKAR RAY

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Introduction

THE occurrence of prehistoric stone implements in the districts of Ranchi and Singhbhum in the state of Bihar are known from the years 1888¹ and 1868² respectively. But their occurrence in the adjoining district of Manbhum in the same state was reported probably for the first time in October 1951³ by Surajit Sinha, then a research scholar in Cultural Anthropology, Department of Anthropology, Calcutta University. Sinha's collection was actually made from time to time between June 1950 and August 1951.

D. Sen, Lecturer in Prehistoric Archaeology in the Calcutta University, visited the area for a few days in October 1951 and collected some stone implements. Among his collection there is a beautiful shouldered celt which he gathered from a local villager.

Later on, at the request of Surajit Sinha, the author of this article made a preliminary survey of that area in the third week of June 1953. This survey was carried out mainly in order :

(1) To make a further collection of implements and (2) to find out whether there is any other suitable site nearby.

With the above object, a preliminary investigation was carried over an area covering about 8 sq. miles between longitudes 86°9' and 86°12' and latitudes 23°58' and 23°60'. As a result of the investigation a microlithic site was found near the neolithic site located by Sinha. This is perhaps the first time microliths have been found in Manbhum. The site yielded 69 implements and 24 cores from which flakes have been removed. And from the nearby area a few neolithic artefacts, such as celts, ringstones, perforated stone beads and potsherds were collected.

* Paper read before the Indian Science Congress, Hyderabad 1954.

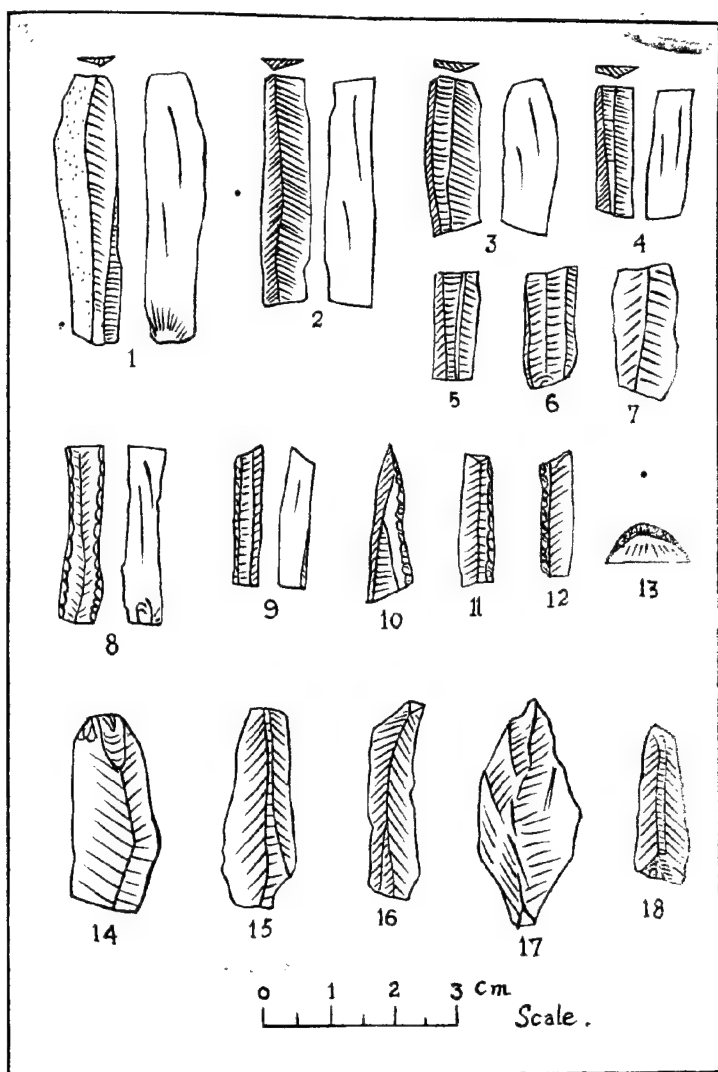


Plate I

Figs: 1 to 7 Microblades without secondary retouch

8 to 13 Microliths with secondary retouch

14 to 18 Microliths of various shapes and without
secondary retouch



Plate II

Neolithic Implements from Bongara

Besides these neoliths one beautiful almond type of hand axe was also collected from the same area.

This paper deals with the microlithic industry alone.

Location of the Site

The microlithic site referred to above is roughly about three miles east of Nimdih railway station, which is situated on a branch of the Eastern Railway which connects Tatanagar with Adra via Purulia. The actual site is a valley formed between a hill range of about 2000 ft. and a few hillocks which are about 1000 ft. in altitude. The valley is a narrow one, more than a mile in length and gradually slopes towards the hillocks and may be said to form roughly three different levels covered with shrubs. For the last few years, the local villagers have been gradually reclaiming this area for cultivation. It is due to the clearing, levelling and ploughing of the fields that stray neolithic implements have been exposed. When any implement strikes the eye of a villager due to its peculiar shape, he keeps it in his home as an object of curiosity; otherwise it is thrown away with other pebbles and blocks of stone. It was mainly through the help of the villagers that Surajit Sinha and the author were able to locate the sites. Different portions of this valley are known as Bongara, Matlagara etc. The microliths were picked up as surface finds more or less from a restricted portion of the second level. The tools were found in association with a fair number of cores from which flakes have been removed. So, most probably, it was a factory site.

Artefacts

1. *Material* : - Most of the implements are made of flint of glassy variety.*

2. *Typology* : It is very difficult to equate these microliths typologically with the standard microlithic types of Europe. This is generally the case with other microlithic industries of India too. So, on the basis of the nature of work done on the artefacts they have been divided into two main groups.

* The author is indebted to Profs. S. Roy and A. Roy of the Presidency College, Calcutta, for identification of the rocks.

(i) The first group comprises the tools without any secondary retouch. This group can be further subdivided into two sub-groups. The first one consists of micro-blades whose edges are sharp. The total number of micro-blades is 37. The sizes vary in length from 3.7 cm to 1.7 cm, in breadth from 1.1 cm to 0.6 cm. The thicknesses are within 0.3 cm. The other sub-group consists of tools of various shapes. They are 16 in number. The sizes are : length from 3.2 cm to 1.8 cm ; breadth from 2.0 cm to 0.7 cm and thickness from 0.7 cm to 0.2 cm. It is very difficult to say whether they were made intentionally.

(ii) The second group comprises micro-artefacts with secondary retouches. The secondary working was done either to sharpen or blunt the edges. In this group we have :

- (a) One lunate (length 1.3 cm, max. breadth 0.5 cm and max. thickness 0.2 cm).
- (b) One blade having secondary retouches on the two edges in order to make them more effective. (length 2.5 cm, max. breadth 1.1 cm and max. thickness 0.2 cm).
- (c) 12 implements either triangular or rectangular in shape having one sharp edge and one blunted back opposite to it. The blunting has been done by secondary retouches. The sizes are : length from 2.1 cm to 0.9 cm, breadth from 0.6 cm to 0.3 cm and thickness from 0.3 cm to 0.1 cm.

Besides these artefacts, 24 cores were collected which vary in size from 1.9 cm to 4.6 cm. More than one flake have been removed from each of these cores.

The microliths of various groups and sub-groups as mentioned above have been illustrated with a few examples of each kind in Plate I.

Dating

At present it is very difficult to assign any date to this microlithic industry. But a thorough work in this area should at least be able to establish a relative chronology for the microlithic cultures of this area, if not an absolute

chronology ; because in the different slopes of this valley different types of implements have been found. Moreover, there is a place which shows traces of a very early human settlement, which appears probable on account of the very coarse nature of the pottery found here.

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EDUCATION IN THE AREA OF BARPALI

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Introduction

IN order to build up the programme of education a need was expressed some time ago by the Project to 'carry out a survey in the schools. Therefore, a research was undertaken in nine schools situated in the area of the Project in order to collect factual data for determining the present educational condition. There are two Upper Primary schools and one Middle English school within the Project area but these are not included in the survey as it is entirely based on Lower Primary standards. Two out of the nine schools surveyed have been very recently started ; so they are not statistically significant. But the reactions and other matters connected with teachers' opinions and students' suggestions etc. have been taken into consideration with the rest of the schools.

A General Picture

All the schools sit in the morning as well as in the afternoon every day for about 5½ hours in the maximum, except for those attached to the Middle English schools which sit from 10 a.m. to 4 p.m. in the rainy and winter season, and 6 a.m. to 11 a.m. in the summer. It has been found on many occasions that the teachers come late to work in all schools. Where there is more than one teacher, one who lives nearer to the school, comes earlier and opens the school and takes the roll of the pupils. Then he conducts one class whereas the other classes remain unattended until the other teacher comes. In case of teachers who live in the village where there is a school they both come to school in time. As soon as the school closes the teachers as well as the students leave the school for their respective homes. In no school is there provision for boarding the boys. There is no necessity of hostels

as the children come from villages which are, so to say, situated at a calling distance from the school.

The schools are situated at the outskirts of the villages and are named after the villages in which they are situated. In almost all cases the school building consists of one room. Where there are two rooms in a school there is only a thin partition wall separating one part from another. In two cases the District Board has constructed the school building and is also responsible for their annual repair. In the rest of the cases the villagers have constructed the schools and maintain them. The salaries of all the teachers in all the schools are paid by the District Board. There is a compound in each school. Pupils have desks and sit on the mats which they bring with them. There are one or two dilapidated blackboards in each school. In some schools a portion of the wall is cemented and blackened to serve as a board. There is no latrine or urinal in the compound of the school. The pupils as well as the teachers ease themselves here and there in or near about the compound. Few schools have a fence all round and the compounds remain barren except during the rainy season when the teachers raise some seasonal vegetables. Except in three cases there is no well in any school compound. At the time of leisure if there is a tank near the school the children go to quench their thirst. The children are accustomed to read at the top of their voice until they learn the subject by heart. The children, by turn, cleanse the floor of the school room, which is constructed from beaten earth, by cow dung once in a week. But the cleaning of the floor once a week is not sufficient, as the latter becomes awfully dirty and dusty within two or three days. The boys sweep the floor everyday. The teachers are all in all in the school. They set up a routine of cleaning of the school which the boys follow.

The repairing of the school building depends upon the villagers where the school lies. They raise subscriptions from each resident of the village and spend them in repairs. The schools in general are so narrow that the boys sit closely and uncomfortably.

Besides study the children play different games and do gardening and compost making in the school compound. But these activities are not sincerely and regularly done. The teachers do not play with the boys always and everyday. Ordinarily they let the children play of their own accord. Except in the rainy season they do not try to grow plants in the compound in dry seasons because of the non-availability of water in the compound and the absence of a fence around it and also due to lack of zeal and scientific knowledge. In one or two schools where the teachers teach the pupil about compost-making they do it in a mock manner. In all the schools the teacher gives more stress on book learning than on field work. The vegetable plants, which are grown in the compound in the rainy season, are cared for by both the teacher and the pupils. The idea is that all vegetables raised will be sold and the money thus earned will be spent in supplying the pupils with tiffin in the school. But in practice this is not done. All the vegetables are consumed by the teachers without giving any benefit to the pupils. This method of raising a garden does not teach anything to the boys and will never enthuse them about fruit and vegetable gardening. In the schools where there are wells in the compound a garden can easily be raised. But due to of want fence or a protection around the compound the teachers do not attempt to grow plants. A good garden needs regular watering and taking care of the plants and a good fencing lest the animals who wander about will destroy the plants. Fencing costs nothing but requires a sincere attempt at collecting fencing materials and putting them around the compound. All these activities can be done if the teachers want to undertake them. But the teachers who stay away from the schools have other heavy work to do at home and fail to devote most of their time in developing the school and its compound, although there is a desire among some of them to do so.

Except teaching the students in class the teachers have no other relationship with them or with their parents. The teachers do not take any interest in the home condition of the pupils. On some occasions they help their parents in writing letters or petitions. Whenever the pupils do not

attend school in large numbers and the teacher apprehends that he might lose his job and be transferred to some other place, he approaches the parents of the boys individually and cajoles them in many ways to send their children to school. Only on such occasions do the teachers and parents of the children happen to meet and talk.

The children read in Lower Primary standard free of charge. They have to purchase reading and writing materials which the Government do not supply. The average expenses which a pupil makes in the Infant, Class I, Class II, Class III annually are Rs. 3/-, Rs. 5/-, Rs. 7/-, and Rs. 9/- respectively. The maximum amount which a parent spends in connexion with the education of his child in the four classes of Lower Primary standard is Rs. 24/-, provided he does not pay extra to the teachers for private coaching and looking after his child. This is not a big sum and it is quite possible that a man will quite easily find this sum out of his farm and other occupational income for schooling his child. As regards the teachers they get a salary varying from Rs. 22/- to Rs. 40/- per month. This is much too small a sum for the primary teachers who build the backbone of the nation. The trained teachers are paid in the scale of Rs. 30 - 2 - 40 whereas the untrained ones Rs. 22 - 2 - 30. There is a great hue and cry among the primary teachers that they are never looked upon with a sympathetic eye. They are meagrely remunerated and that too does not come to them regularly at the end of every month. There are many teachers whose salaries are in arrears. This sort of irregular payment of salaries and unjust treatment of the teachers is extremely prejudicial to the progress of education in the rural area.

Background Life History of the Teachers

All the teachers of the schools concerned are village-born and are local district people. They are teachers of schools in their own villages which are not far from their birthplace. There are generally two teachers in each school except for a few, such as Teleimal, Kusanpuri etc. where there is one teacher in each because of the small size of the school.

The head teachers have generally seven years of schooling and training whereas the co-teachers have only seven years schooling and no training. In one-teacher schools the teacher is generally untrained. Most of the teachers have land and this is their main source of livelihood. The income from the school supplements their principal source of living. The teachers who have no land or not enough to live plentifully by it, live mainly on the income from the school. The monthly salary which they get in return for their services is scanty and not enough for a man and his family to manage for a month. Therefore the teachers have to do other work to meet their financial needs. The teachers who have land and work in their village schools, carry on their agricultural duties at home even during school hours. A few of them also spend some of the school hours in astrology, calculating and predicting the horoscope of their clients. The teachers who work in schools of other villages try to get away from school as soon as it closes and are regularly late at school. The teachers whose villages are far away from their place of working find difficulty in attending school daily because of the distance. They usually make arrangements for their board and lodging in the village where they work. They cook their own meals. They teach the pupils in the village school as well as serve as private tutors. In the case of two-teacher schools both the teachers do not stay in the same village. One stays in the school village and the other in some nearby village from which some of the pupils also come. The teacher who stays in the non-school village collects all the pupils and guides them to the school every day. There is a general feeling, which all the teachers have expressed in their reports, that they are poor and their salaries are low. They are not regularly paid at the end of every month. Sometimes all payments are suspended for more than a month due to some official technical difficulties. Some of the teachers have expressed that they had taken up schooling with a concept not merely of teaching to read and write but also of imparting education in good manners, discipline in life and decent behaviour, etc. But they lack interest in teaching things to their pupils because of want of

time to devote whole-heartedly for the well-being of their students. Many knew clay modelling and scouting but they are never found teaching their boys about these.

Statistical Information

In the first section statistical information on the total number of school-going students, caste by caste, the proportion of those who attend school, seasonal variation in attendance and annual caste-wise attendance and non-attendance figures are given.

This survey was carried out in nine schools. They are Raksa, Kumhari, Kainsir, Tulandi, Sikirdi, Satlama, Agalpur, Tehimal and Kusanpuri. The total strength of the students according to attendance register is 501. But the total figure of the number of pupils present on the day of visit was 329.

From the general census survey it is known that there are several castes living in the above nine villages. The following chart gives an idea regarding the total number of children between the ages of 5 and 15 of each caste in the above villages. It also shows caste by caste the proportion of those who attend school.

TABLE I

<i>Caste names</i>	<i>Of school-going age</i>		<i>Attending school</i>		<i>% Boys + girls attending</i>
	<i>Boys (5-15)</i>	<i>Girls (5-15)</i>	<i>Boys</i>	<i>Girls</i>	
Ganda	139	134	30	6	13.18
Mali	33	33	13	4	30.30
Gour	219	197	52	2	25.62
Kulta	72	76	27	6	22.29
Pandra	57	47	24	2	25.55
Kumbhar	20	15	2	2	11.43
Sundi	—	5	—	3	60.0
Sahara	59	44	7	—	14.09
Gond	54	26	11	1	15.0
Binjhal	29	34	3	1	27.77
Teli	33	29	14	2	25.80
Dhoba	30	19	7	—	14.28
Keut	41	50	18	3	13.07
Thanapati	7	16	4	2	26.09
Bairagi	3	6	3	—	42.85
Bhandari	7	5	4	—	33.33
Brahmin	41	30	29	12	57.74
Tiar	1	1	1	—	50.0
Bania	4	6	3	1	40.0
Khadra	9	17	2	2	15.38
Bhutia	14	8	9	—	40.90

The above table shows that the maximum percentage is 60·0 and the minimum 11·43. The former relates to Sundi, a business caste and the latter to Kumbhar (potter). If a comparison is made among the castes given in the chart it is found that the children belonging to Tiar (fishermen), Brahmin, Bairagi (a religious caste) and Sundi castes are attending school in large numbers.

In the school survey, the attendance figures for one year of each student were copied from the attendance register from each school and analysed with a view to finding out seasonal attendance, average attendance of each class and each boy, etc.

The following table gives the attendance figure in percentage on caste basis.

TABLE II

<i>Caste names</i>	<i>Occupation</i>	<i>Average attendance %</i>
Ganda	}	37·02
Bhulia		4·5
Mali	Gardening	63·3
Gour	}	37·5
Kulta		56·6
Pandra		40·1
Kumbhar	Pottery making	45·0
Sundi	Business	69·7
Sahara	}	60·2
Gond		39·2
Binjhal		79·5
Teli	Oil-pressing	49·3
Dhoba	Washing	32·1
Keut	Fishing and parching rice	46·4
Thanapati	}	65·1
Bairagi		55·3
Rhandari	Shaving and hair-dressing	61·0
Brahmin	Religious service	61·7
Tiar	Fishing	60·8
Bania	Smithery	55·3
Khadra	Business in bell-metal etc.	80·4

If Tables I and II are put in grades as shown in the following it would be easy to compare them with each other.

TABLE III

(Chart II) Showing the castes and their average attendance in the school by percentage.

Per cent

(Chart I) Showing the Castes whose children are enrolled.

Bhulia	0 to 10.99	x
x	11 to 20.99	Ganda, Kumbhar, Sahara, Gond, Dhoba, Keut, Khadra.
x	21 to 30.99	Mali, Gour, Kulta, Pandra, Binjhal, Teli, Thanapati.
Pandra, Gond, Dhoba, Gour, Ganda.	31 to 40.99	Bhandari, Bania, Bhulia.
Kumbhar, Teli, Kent.	41 to 50.99	Bairagi, Tiar.
Mali, Kulta, Sundi, Sahara, Binjhal, Thanapati, Bhairagi, Brahmin, Tiar, Bania, Khadra.	51 and above	Sundi, Brahmin.

The chart reveals some important points which are as follows :—

(1) The number of children belonging to Bhulia caste (expert weavers of Barpali) who are enrolled in the school varies from 30 to 40 per hundred. But they attend school less than 10 days in a period of 100 days (i.e., only 4.5%).

(2) The number of children of Ganda, Kumbhar, Sahara, Gond, Dhoba, Keut and Khadra, who read in the school varies from 11 to 20 per hundred. But they attend the school in the following order of days in a period of 100 days.

Ganda	}	31-40 days.
Gond		
Dhoba		
Kumbhar	}	41-50 days.
Keut		
Sahara	}	51+above days.
Khadra		

Fewer Sahara and Khadra children are enrolled in school but they attend it regularly.

(3) Sundi and Brahmin children read in the school in large numbers, i.e., above 57 per hundred children and they also attend the school regularly, i.e., above 51 days in 100 days.

The children of the above three categories may be described in the following way :—

1. There are children belonging to some caste (Sahara and Khadra) who read in school in lesser numbers, i.e., 10 to 20 per hundred but attend it more than 50 days in a period of 100 days.

2. There are children belonging to some castes who read in the school more or less in large numbers, that is, 30 to 40 per hundred but attend it less than 10 days in a period of 100 days.

3. There are children belonging to some castes (Brahmin, Sundi) who read in the school in larger numbers and attend it also more days in a period of 100 days.

The reason of irregular attendance in case of those castes who send their children more or less in large numbers is because there is more work at home for the children to do. The children belonging to the first category have to work at home and their parents prefer apprenticing them in their caste occupation. That is why the children of such castes do not go to school. The castes of this category are, as a matter of fact, poor and live on a subsistence level. Therefore, in view of poverty and work at home, their parents do not like their boys to go to school. Those living above subsistence level do not require their children to work. Lastly, the castes who send their children in larger numbers to the schools and attend them regularly can afford to give their children primary education. Moreover, they have a desire for schooling their children because it helps a great deal in their caste occupation.

We shall now try to find out the causes of a low rate of attendance.

Amongst these causes the following are the important ones :

- (a) Work at home.
- (b) Lack of interest.
- (c) Endemic disease and malnutrition.
- (d) Distance from village to school.

(a) *Work at Home*

Work at home, which is a serious obstacle to regular attendance, plays an important part in the seasonal variation of attendance in the school. The following chart shows clearly that there is a variation in attendance seasonally.

TABLE IV
Attendance in Percentage

<i>Name of school</i>	<i>Summer</i>	<i>Rains</i>	<i>Winter</i>
Raksa	16.85	24.2	18.37
Kumbhari	29.2	63.2	66.2
Kainsir	52.9	63.2	67.02
Tulandi	59.75	70.36	68.44
Agalpur	34.53	49.63	55.29
Satalma	44.72	56.47	59.45
Sikridi	55.98	78.71	81.14
Mean	41.85	57.89	59.39

There is less attendance in summer season which includes the months of February, March, April and May and half of June (Falgun, Chait, Baisakh and Jesta). After the summer season the percentage of attendance increases until winter when it is highest. The attendance during the rainy season falls between the summer and winter attendances. The seasonal variation in attendance has a great bearing on the seasonal activities round about this area. Therefore, a calendar of seasonal activities and a routine of monthly engagements with particular regard to the part played by children of between ages 5 and 15 in the activities is necessary, otherwise nothing will be clear from the seasonal attendance table.

TABLE V

Seasonal calendar and routine of monthly engagements

<i>Season</i>	<i>Months</i>	<i>Activities</i>	<i>Work of children</i>
	Feb.-March (<i>Falgun</i>)	Harvest of <i>chana</i> (gram) and Wheat, hoeing the field cultivated with sugarcane and onion, manuring these fields, and plowing other fields.	Tending cattle, watching the sugarcane and onion fields and watering them, collecting fuel.
	Mar.-April (<i>Chait</i>)	Hoeing the sugarcane fields, growing arum, harvesting onion.	Watching the Heaviest field watering them, months collecting fuel and for children.

Season	Months	Activities	Work of children
Summer (Grisma)	Apr.-May (Baisakh)	Harvesting sugar-cane etc., vegetable etc., in the field. Keeping sugarcane, arum and sweet potato in germinating condition.	Collecting cowdung, stocking straw, feeding bullocks and cows, carrying, manure to the fields, collecting fuel.
	May-June (Jesta)	Taking care of the fields, of sugarcane, etc., planting ladies finger, sunnhemp.	Watering their fields, carrying food to their parents in the fields, collecting fuel.
	June-July (Asarh)	Sowing paddy, corn, millets such as <i>gulgi</i> , <i>kodo</i> , and <i>mandia</i> ; planting sweet potato, growing peanut, and white <i>mung</i> .	Tending cattle, carrying food to the fields for their parents.
	July-Aug. (Sraban)	Puddling the fields for transplanting; <i>bihuda</i> operation, growing <i>biri</i> , and other cereals and bean (<i>jhunga</i>).	Tending cattle. Not so heavy as above
Rainy (Barsa)	Aug.-Sept. (Vodo)	Weeding, growing <i>mung</i> , tending cattle, cutting grass for the cattle, watching the field and the bunds and repairing them. Making the <i>At</i> land ready for vegetable growing.	Tending cattle, cutting grass.
	Sep.-Oct. (Aswin)	Weeding, harvesting <i>kulia</i> paddy (<i>At</i> paddy) and <i>mandia</i> , beginning to grow brinjal, <i>chilli</i> , tomato, cabbage, potato; cutting sunnhemp.	Tending cattle.
	Oct.-Nov. (Kartik)	Harvesting paddy, and peanut, sweet potato, sweet potato, <i>nasi</i> , <i>biri</i> etc., growing brinjal, chilli, tomato, etc.	Tending cattle, collecting cowdung.
Winter (Sita)	Nov.-Dec. (Magusir)	Harvesting paddy and threshing paddy, and <i>mung</i> , sweet potato, and radish, growing sweet potato, plowing the fields to turn the paddy stalks (straw) under to rot.	Tending cattle and Children collecting cowdung are not required so much as above.

<i>Season.</i>	<i>Months.</i>	<i>Activities,</i>	<i>Work of children</i>
	Dec.-Jan. (<i>Pous</i>)	Threshing paddy, watering the vegetable and other plants grown previously ; harvesting <i>kodo</i> .	Tending cattle and collecting cowdung.
	Jan.-Feb. (<i>Magh</i>)	Harvesting wheat, brinjal, chilli, tomato, green leaves, growing sugarcane and onion, plowing <i>Mal</i> and <i>Berna</i> land, collecting the straw in <i>gudda</i> (place where straws are heaped). Watering the fields of brinjal, tomato, etc.	Watering the fields, tending cattle.

Notes to Table V : Some children after the age of 13 assist their parents in their regular field activities.

The above chart of monthly engagements deals with activities connected with agriculture. So the work and time taken for doing those works in different seasons will be found out in case of those who live by agriculture. Regarding the activities of the children of the weavers and smiths etc. this chart is of no use. The weavers, such as Bhulia and Ganda, find a very good market during marriage ceremonies and after harvest. After harvest everybody has his paddy bins full with paddy. He is now happy because the toil of the year in the fields is over and he has plenty of food to eat. Naturally he tries to finish up his most expensive duties such as marrying his children and inviting fresh negotiations for marriage etc. In all these works a lot of new clothes and gold ornaments and iron materials used for domestic purposes are necessary. Ordinarily the people in general try to purchase new clothes in place of the old ones after the harvest is over. Therefore, a great deal of buying and selling of clothes and ornaments takes place for about three to four months after harvest until the accumulated wealth is nearly spent up. This sort of thing goes on every year. The weavers wait for this time. As soon as it sets in they flood the local markets with clothes of various colours and designs. During this period all hands in the family are set to weaving and even sometimes extra hands are required and plenty of clothes are turned out.

This time of heavy work comes after the middle of January-February (*Magh*) and continues until the end of May-June (*Jesta*). Then comes a slack in the cloth market. Nevertheless the weavers do not on any account stop their looms. They carry on their business, however, from hand to mouth. In weaving complicated designs a weaver always needs a boy at his side to weave the side borders and that boy is generally paid Rs. 60/- per month. If the weaver has no son of tender age he employs a boy for the purpose. A boy in a weaver's family begins his work on the loom from the age of nine.

Regarding the work of bell metal and other metals done by Khadra, Kansari and Bania, the little children and specially girls are employed in washing and brushing ornaments and utensils, etc. In the case of Keut, Bhulia and Dhoba castes, the women have major works to do at home. A woman of the Keut caste fries rice which is called *muri*, and sells it either in the village or in the market. A Bhulia woman does all preliminaries connected with weaving and prepares the yarn for weaving. In case of the Dhoba caste the man collects clothes from house to house and the woman washes them. Therefore in order to allow the mother or both the parents to work, the elder children from a very early age are put in charge of the young ones and have full responsibility for them either in the absence of the parents or while they are busy at work. As the children in agricultural families are put in charge of tending and generally looking after the cattle and helping their parents in the sugarcane or paddy fields and vegetable gardens, so also the children in the Bhulia and other artisan families have enough work to do which keeps them out of school during these months.

(b) *Lack of Interest*

If a book reads well and is interesting the reader continues till he finishes it. The children use a most incongruous set of text books, most uninteresting to the boys. The books are written in Oriya script and in literary Oriya which is not spoken in this area. The contents of the books are such that the boys do not appreciate them. The descriptions of scenery or techniques in these books often transport them into a world entirely

foreign to their own. This is purely mechanical education and the method of teaching is primitive. A boy reads a subject at the top of his voice over and over again until he learns it by heart, without understanding the meaning of it. The teachers do not try to arouse the children's curiosity and broaden their understanding. This mechanical study is not even assisted by a blackboard or picture books, charts or illustrations. Under the circumstances, the question of aiding the children with visual materials in their schooling sounds ridiculous. The children do not learn anything in the school that will help them in their own caste occupation or trade or make their daily life easier and more varied. This is not done because of the lack of two things, namely, lack of equipment in the school and proper books, and secondly, lack of technical knowledge and training on the part of the teachers. This area of the district of Sambalpur, is full of readable materials connected with the life of great poets and heroes and highlanders such as Gangadhar, Sunder Sai, Balaramdas, on the one hand, and Binjhals, Gonds etc., on the other. The original history of towns such as Bargarh, Sambalpur or Barpali would make very interesting reading. The history of the Chirihan dynasty connected with the origin of Bargarh and Sambalpur should prove extremely fascinating. The geography of the country bears mountains, rivers, peculiar land contours, extremes of climate, roads etc., about which there are heart appealing tales to tell. If a syllabus were prepared on the subject matters of local geography, history and literature and general science it should certainly be interesting to the children of this locality. There is an express lack of interest among the parents in sending their children to school. They aim at only one thing which school training gives to their children, that is covered by the word 'Babu'. A farmer's child or a carpenter's or weaver's child, after a long period of schooling will become a babu or an officer or a white-collared lawyer, which are considered to be the real and great achievements in the life of a man. The change from plough to pen in the life of a farmer's son is the great ambition of his parents. But this change involves a lot of years and money which a farmer cannot afford to spend. Therefore, he says, 'What is

the use of schooling my son? We have no resources to educate him till he becomes a babu.'

(c) *Endemic disease and malnutrition*

Our enquiries have revealed that though sickness is not a serious cause of low rate of attendance, it still is an obstacle to regular attendance. This will be understood from the chart given below.

TABLE VI

<i>Caste Names.</i>	<i>Non-attendance</i>	
	<i>Work at home and lack of interest etc.</i>	<i>Sickness</i>
Ganda	83'14	16'86
Mali	78'57	21'43
Gour	91'24	8'76
Kulta	79'89	21'11
Pandra	100'0	—
Kumbhar	92'21	7'79
Sundi	100'0	—
Sahara	84'03	15'97
Gond	100'0	—
Binjhal	100'0	—
Teli	69'55	30'45
Dhoba	95'02	4'98
Keut	86'92	13'08
Thanapati	71'43	28'57
Bairagi	100'0	—
Bhandari	100'0	—
Brahmin	84'79	15'21
Tiar	89'34	10'66
Bania	100'0	—
Khadra	53'09	46'91
Bhulia	100'0	—

According to the parents the common sicknesses from which the children suffer are headache, colic, fever and small pox. To the obstacle caused by sickness, the problem of malnutrition, can also be added. When the school sits from 10 o'clock to 4 o'clock, the children eat their midday meal before coming to school and have nothing further to eat until they reach home.

Although the children eat a little tiffin such as *muri* (puffed rice) at midday during the leisure hour, this is only for the few. In case of morning schools the children hardly find any substantial food to eat before they come to school. Generally speaking the people of this area eat their chief meal round about midday. The housewife begins preparing the meal nearly one hour before meal-time. Therefore school-going children who leave for school at 10 o'clock miss this meal and get their first and only substantial meal in the evening. In the case of morning school, the child goes, so to say, unfed but gets two substantial meals daily. Thus they are accustomed to a very limited diet which tells upon their health, and this makes the children at school inattentive and sleepy.

(d) *Distance as an obstacle*

Distance is an obstacle in this area. Where there is a school in a village the children of that village read there. Very few children from other villages where there are no schools attend, because of distance between the villages and inter-village animosities. Every village likes to have a school of its own. But in many, as soon as it is started, enthusiasm dies out and the school begins to fail.

Opinion study among Teachers and Students

The teachers of all the schools surveyed feel that the present educational situation in the country is very unsatisfactory. If nothing is done in order to improve the situation this sort of education for the children will be nothing but mockery. What they suggest for the improvement is very interesting and is given below. They suggest that there should be a *good garden* attached to the school. Flowering and vegetable plants will be grown and reared and watered by the pupils and teachers in co-operation with each other. The boys will be taught from the garden how plants are grown and under what conditions the plants thrive and fruit. A good school must have a neat and clean and a well-built building in the outskirts of the village. It should be repaired regularly every year. It must have all

teaching materials such as maps, a library, good black-boards and a clock, gardening implements and other necessary tools. Children should be provided with seats. Education ought to be compulsory. Every parent who has children of school-going age will be asked, under the penalty of law of the state, to send their children to school. In primary education the teachers must lead an exemplary life and bear a good moral character. There should be co-operation and better understanding and fellow-feeling between the teachers and the village people. The teachers must have a knowledge of games and ability to be pleasant and cheerful in the company of the students.

There should be sports and prize distribution once annually in the schools. The teachers feel a reshuffling of the subject matters included in the present curriculum of study is necessary. The students will be taught according to the changed syllabus strictly. The teachers will try to make the pupils village-minded and train them to be good social workers. The teachers must have good health and training in a variety of subjects which they can teach the boys with a view to their applying this knowledge in the practical field of life.

Some of the leading students of each school were asked as to how they feel about the present educational system and what improvements they suggest in order that they might be happy and feel attracted to come to school regularly. The majority of the boys interviewed said that the teachers cane them severely, they are beaten like beasts ; therefore they are afraid of the teachers. The second thing which the boys pointed out is this. They said they would feel happy if there were a strong fencing round the school compound with a beautiful flower garden in it. The next thing which they suggested was that plays and games should be given some important place like book-learning in the curriculum. Reading and playing should go side by side. They felt the school needs building repairs every year and it should be furnished with pictures, diagrams and illustrations in various subjects. The school and its surroundings must be kept neat and clean always. The school building needs extension as the

present accommodation is too restricted. They said that if the school building is extended there will be more room and they can sit comfortably and openly. The boys say that whatever vegetables are grown in the school are consumed by the teachers. The boys feel extremely unhappy about this. They said that the vegetables should be shared with them. The boys have marked that the teachers do not come to school regularly everyday and also in time. They say that teachers come to the school late and long after the boys. The boys said that there is no teaching of handiwork or clay modelling etc. in the school. They have marked that the school building serves as a place at night for secret love-making by men and women of the village. They said that the school building which is a holy institution should be protected against this sort of clandestine use.

Conclusion

The above pages deal with education in the area of Barpali. It is that education which is carried on by means of an institution in the hands of the teachers. A place is fixed which is called the school where the boys come to read and a time is fixed which is called school hour when the school works. A boy or girl goes to school with a view to learning how to read and write. The general opinion in this area seems to be that the aim of education is to qualify a boy for a job in an office. This institutionalization of the process of education does not teach a young boy the codes of proper behaviour and good moral conduct and discipline to prepare him for good citizenship.

By and large the educational process existing at present in our country for the young children inculcates only the knowledge of reading and writing to them. This is without doubt a good thing, but how far this helps one in making a living in a society which stands below the level of subsistence is the question. Recognizing the difficulties and inefficiency of the present set-up of education the educational experts of our country advocate vocational training or basic training to replace the primary schools. The idea behind basic training

is to train young persons through crafts and instil in them the spirit of co-operation, love for the country and its culture and try to make them village-minded and good social workers. After the required period of time under basic teaching, it is hoped that the trainees will be able to take their place smoothly in life. Though there are many basic institutions in the country working parallel with the older educational institutions, no measures have been taken to start vocational institutions for those who wish for more advanced training. Before we emphasize the effectiveness of this educational procedure, it is felt that vocational training, in which there will be big buildings full of complicated machines which would require enough skill and long-term training to handle, is not required. Ordinarily, any farmer knows how to plough and all other activities connected with agriculture beginning from sowing to granaring. He also knows how to fish and make fishing implements. He knows a little of carpentry. Since his childhood he has been continuously engaged in learning the processes which he must later employ in getting his living. The technology of our material culture is so simple that it requires little skill to manipulate the tools. Therefore, this permits children to be trained to do useful work at an early age. In a society which lies below the level of subsistence and where not enough food is produced to provide for basic physiological needs, teaching the children simply to read and write or to be expert in some handicrafts is not enough unless a sufficient number of pupils are trained in improved agricultural techniques and food production. The school should include teaching of both agriculture and non-agricultural techniques simultaneously. One of the most important causes of the low rate of attendance in the school is work at home. The parents want their children to sit by and watch and work with them even from the early years rather than send them to school, which means nothing to them practically. In spite of the fact that the boys have much to do at home, they would have gone to school more or less regularly if the school hours were different. In addition to this

change in timing of the school hours, the school would do well if it would be village-centred and the atmosphere around the school would be village-like. More emphasis need be given on training to do more useful work which would help the children later on in earning their living. Childhood is for most human beings a care-free period of life and the urge to learn is basic in all children. They are more eager to learn than the elders to teach. For training such young minds a set of persons trained in child psychology and fully experienced in village life and activities is required. They would make the school their home and the home of their pupil. They should be decently paid and the payment should be made as regular as the clock goes. In order to make the school more effective, the co-operation of the parents in the administration and execution of the work in the schools is absolutely necessary. A day should be appointed as parents' day on which all the parents would gather in the school and discuss questions concerning the progress of the school. Similarly, there should be a teachers' day in which all the teachers of schools situated within a radius of 10 miles, will assemble in a pre-arranged school and share one another's experience in village life and teaching village children. What is most needed in a teacher are sincerity, hard work, discipline and regular habits, which the present staff of teachers in the schools surveyed stand in want of. The opinion of the school children should be taken into consideration in matters of improving the condition of education.

In summing up, let us hope that an improved school system in the area of Barpali can be evolved to meet the needs of the people as expressed by the students and teachers, and as suggested by the best thinkers on the subject of primary education in our country.

A NOTE ON THE KINNARAS

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THE Kinnaras, an ancient non-Aryan Himalayan tribe, have been very frequently mentioned in early Indian literature along with the Gandharvas, Yakshas, Kiratas and others. In the Mahabharata they have been considered as a class of the Gandharvas, *Kinnara nama gandharva naranam tathāpare*¹. In the Matsya-purana they have been associated with the Kiratas and the Yakshas. Both the Kinnaras and the Yakshas appear to have belonged to the same stock as the Kiratas and the Sabaras².

The etymological meaning of the term Kinnara is "an ugly man", "what sort of man?" or "is he a man?" (*kim kutsitah narah*)? It may be conceived that these people were uglier than the Aryans having peculiar physical characters.

As to the description of their features the puranic writers refer to them as *asvāmukhas*, *turāṅgavaktas*, *mayus*,³ etc. In the Vayu-purana they have been divided into two classes—*asvāmukhah* and *naramukhah* (*utpāditah naramukhah kinnarah samsāpayanah*)⁴. The description of the Kinnara as *asvāmukhah* is very significant. It becomes clear that they had a horse-like face, i.e., to say the prognathism was very marked amongst them. They have been further described as *harinanartvakah*, i.e., dancers like the deer.

In this connection it is very interesting to refer to a particular custom prevalent amongst the people of the Kanaur valley. From the first of Baisakh up to the 15th of the month, the boys and the girls engage in dancing with masks of horses and deer. Other people also engage in mock-fighting with the masked dancers. It may reasonably be suggested that the Aryans, saw them first as masked dancers and described them as such in order to distinguish them from other Himalayan tribes. But the truth appears to be that they have been described as

horse-faced because of their marked prognathism. Even to-day certain sections of the people of the Kanaur valley possess a marked prognathism and Armenoid nose.

Further, the Kinnaras like the Gandharvas have been described as *gitamodinah*, i.e., delighting in songs, *deva-gayakah* or *svargagayakah*, i.e., celestial singers: *sahas-rasogandharvakimpurushakinnarajoh*. Kalidasa in his *Raghuvamsa* describes them as singing the adventures and the heroic deeds of Raghu⁵. Men and women used to sing together: *samraktabhistripuravijayah giyate kinnaribhih*⁶. The Kinnara women had also a good taste for dress as we have it in the *Harivamsa*: *Kinnarascha suvasasah*. They had a finer aesthetic sense. They decorated their houses with flowers and leaves. Thus, in the *Raghuvamsa* we have,

*Sobhayanticha tadvesma bhramamana varastriyah
Yatha karlasasringani satasah kinnariganah*⁷.

The Kinnara women were famous for their good taste, beauty, and singing. That the Kinnaras were good musicians, singing songs with music on the lute, becomes clear also from Bana's *Kadambari*⁸. The Kinnara women have been rightly described as *nrityagitapragalbhah*⁹.

They were undoubtedly the celestial musicians. The Kinnaras along with others sang on the occasion of the birth of Gautama. That they were famous for their songs and dancing becomes clear also from many Jataka stories as well as from sculptural representations. In the Takkariya-jataka we are told that a hunter captured a male and a female Kinnara who were then presented to the king. The king was told that these creatures could sing with a honey-voice and dance beautifully such as no man could¹⁰. Most probably this story has been represented in a relief of the Barhut stupa¹¹. In this relief we find the Kinnara couple wearing leaves of trees and standing before the king. Attasadda-jataka also refers to a pair of Kinnaras who bedecked themselves with many flowers of choice as they were descending a hill. Besides, the Chanda-kinnara-jataka describes their sportive habits. This story of the Jataka has been well represented in a Gandhara

relief preserved in the Indian Museum (No. 5130). The relief depicts the "abduction of a woman by a king after her male companion was shot by him in a forest country where the couple had gone to indulge in music and dance"¹². The couple here have been represented as human beings "clothed in heavy drapery peculiar to the locality". Dr. Banerji has pointed out that the Kinnaras have two forms, "a hybrid one with the body of a human being and the other a normal human one—the idea being that the former typified beings were inimical to man and the latter were friendly spirits". In this connection it is interesting to note that on a medallion from Bodhagaya there is the depiction of the seduction of a man by a horse-faced female figure (*Yakhhini assamukhi*).

As to the origin of the Kinnaras, the Bhagavata-purana states that Brahma created the Kinnaras and the Kimpurushas¹³. They have also been described as having sprung from the toe of Brahma with the Yakshas; but according to other accounts they were the sons of Kasyapa¹⁴. In the Bhagavata-purana they have been further described as being born of Brahma's shadow frequenting Kailasa¹⁵. It is said that at dawn they sing in praise of Brahma. In the Matsya-purana they are described as being born of Arishta and Kasyapa living in the Himalaya. Chitraratha has been described as their overlord¹⁶. In the Vayu-purana we are told that they were the sons of *Asvamukhas* and that they had a number of *Ganas*¹⁷. They have been also described as the servants in Sivapura¹⁸. According to the Bahvricopanishad, Devi was at first all alone. She then created the egg of the world and came to be known as *Kamakala* and *Sringarakala*. She then created Brahma, Vishnu, Rudra, the Maruts, Gandharvas, Apsaras, Kinnaras and all players of musical instruments from every direction¹⁹. The Amarakosha also ascribes the origin of the Kinnaras to divine sources. In the Vishnu-purana it has been, however, clearly stated that the Great Progenitor created the Kinnaras with the heads of horses²⁰. This is in full accord with their description as *asvamukhah*. Here it may be suggested that along with the brahminization of the non-Aryan deities Siva, Kubera, etc., the Kinnaras, the

inmates of Kailasa, the paradise of Siva, have been also ascribed divine origin like the Vanaras, Nagas, Gandharvas and others and were reckoned as celestial musicians.

In early literature they have been commonly associated with the Himalaya. In the Sama-jataka the great king gathered fruits with a band of Kinnaras on the mountains²¹. In the Takkariya-jataka as well, they are associated with the Himalaya. When the female Kinnara was released, the king said,

She that hath spoken, let her go, that she
The Himalaya mountain again may see²².

Again the king recited,

Live if thou wilt, O timid one ! to Himalaya go ;
Creatures that feed on shrub and tree the woodland
love, I know²³.

Then follows a very beautiful description of the Himalaya²⁴. Sakka gave advice to the Kinnaras as follows :

“From this time forth, go not down from the mountain of the moon amongst the paths of men but abide here²⁵.” From the Jataka no. 546 it becomes clear that they lived in the hills and caves, and that a hermit fell in love with a Kinnara woman²⁶. It becomes also clear from the Chanda-kinnara-jataka that they usually lived on the top of the mountains and that they were absent from the world of men²⁷. They used to come down only during hot weather²⁸.

In early Sanskrit literature they have been similarly referred to as living in the Himalaya. Kalidasa, while describing the conquest of Raghu, says that the king reached the top of the Himavat and fought against the hill tribes and came into contact with the Kinnaras²⁹. In the *Meghadutam*, it is said, “there the bamboos as they are filled with the void, produced pleasing sound, while the victory over Tripura is sung in chorus by the wives of the Kinnaras”³⁰. They are also introduced in the city of Kubera and Alaka. It is said that the Kinnaras have a melodious voice singing the glory of Kubera. Bana's reference also confirms the testimony of Kalidasa. According to Bana, the Kinnara country is curious and the world beautiful³¹.

In the Bhagavata-purana they have been described as frequenting Kailasa³², and in the Matsya-purana as living in the Himalaya. The Vayu-purana refers to them as servants of Sivapura³³, and as living in the Mahanila hills³⁴. Kailasa is further described as having a hundred cities³⁵. The Vishnu-purana describes the mountains on the four sides of Meru. The valleys have been described as the favourite resort of the Siddhas and the Charanas. "And there are situated upon them agreeable forests and pleasant cities, embellished with the palaces of Lakshmi, Vishnu, Surya and other deities and peopled by the Kinnaras"³⁶. We are further told that to the north of *Bharatavarsha* lies *Kinnaravarsha*³⁷. It shows that they had a region of their own.

Generally speaking they are located in Kailasa and Mahanila hills. Kailasa, which is a *maryadaparvata*, stands according to the Matsya-purana, "*Himavatah prishthe*"³⁸. Kailasa is the fabulous residence of Kubera and the paradise of Siva. It is placed in the Himalayan range and is regarded as one of the loftiest peaks³⁹. Bana, in his *Kadambari*, while describing the sojourn of Chandrapida, says that Suvarnapura is the farthest bound of the earth to the north, beyond it lies a supernatural forest and beyond that again is Kailasa. Chandrapida conquered Suvarnapura, not far off from the Eastern Ocean, the abode of the Kiratas who dwell near Kailasa. During his sojourn he beheld a pair of Kinnaras whom he tried to catch in vain⁴⁰.

This Kinnara country may be identified with the modern Kanaur in the upper valley of the Sutlej. In Kanaur even to-day the Raldang mountain is said to be a chip of the true Kailasa brought down to Sangla by the wishes of an ancient king. To circumambulate the hill, i. e., the abode of Siva is still considered meritorious⁴¹.

Under the circumstances it may not be unjustifiable to identify the Kinnaras of early literature with the modern Kanauris who are the inhabitants of the modern Kanaur valley belonging to the Bashahr state on the bank of the upper Sutlej. The land of the Kanauris is a secluded hilly tract which is rugged in an extraordinary degree. It is

bounded on the north and west by the mountains covered with perpetual snow which separates it from Ladakh. There are a number of ranges in the south; on the west lies Dusow, a former division of the state, and on the east is a lofty ridge separating it from the elevated plateau of the Chinese territory. There are also several passes through this country. The greater part of Kanaur is occupied by snowy mountains, inaccessible ranges, and impenetrable forests.

The descendants of the old Kinnaras live to-day in this Kanaur valley extending up to the Simla hills. They are known to-day as Kanauris. They speak a Tibeto-Burmese language closely allied to those of Lahul and Malana. Grierson thinks that these dialects have a striking resemblance to the Munda language. The Kanauri dialect is a mixture of Pahari, Tibetan and other dialects. The Kanauris call their dialect *Kanauring-skadd*. They have left their name on the Kanauris' plain near the modern camping ground of Phati Runi, and the whole of the upper Parvati valley is known to this day as *Kothi-kanauri*; its inhabitants, though they have forgotten their language and are becoming gradually assimilated with the Kulu people, are still regarded as foreigners. They are, most probably, the descendants of the Kanauris who gave up trade for farming⁴².

The modern Kanauris have retained many characteristics of their Kinnara ancestors. Even to-day their sportive habits and fondness for singing and dancing cannot be favourably compared with those of any other tribes. They are jolly and gay, being always cheerful and happy. They always sing in melodious voice wherever they go. It is an usual practice with them to sing and dance every evening. They are also in the habit of dancing before the village deities reciting hymns and singing their glories.

So the Kanauris seem to be the true descendants of the *devagayakah* and *svargayakah* Kinnaras.

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- ⁶Meghadutam, 37.
- ⁷Raghuvamsa, XII. 48.
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- ¹⁵Bhagavata-purana, III. 20'45.
- ¹⁶Matsya-purana, 6'45 ; 8 ; 6 ; 13'16 ; 23'39 ; 117'8 ; 121'48 ; 148'92.
- ¹⁷Vayu-purana, 64'31, 36-7.
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- ²²*ibid.*, Vol. IV., p. 160.
- ²³*ibid.* p. 181.
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ON THE INCIDENCE OF FORAMEN OF CIVININI AND THE PORUS CROTAPHITICO-BUCCINA- TORIUS IN BENGALI SKULLS

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THE non-metric morphological characters of the skull (Wood Jones, 1931) have so far received very little attention in this country. In the present paper two characters of the sphenoid have been taken into consideration.

(1) The foramen of Civinini is formed by the ossification of the ligamentum pterygo-spinosum. This ligament stretches from the angular spine of the sphenoid to the spine of Civinini, situated near about the middle of the posterior border of the lateral pterygoid lamina. The total ossification of the ligament completes the foramen of Civinini.

(2) The porus crotaphitico-buccinatorius is formed by a bony bar connecting the inferior surface of the great wing of the sphenoid and the base of the lateral pterygoid lamina.

The above two characters have been observed in 80 human skulls collected from Contai Subdivision, Midnapore District, West Bengal, after the last famine of 1942-43. The skulls belong to the Department of Anthropology, University of Calcutta. The spine of Civinini and the spinangularis have been found in 5 skulls only; the foramen of Civinini being complete in two cases (C. 29, Fig. 1; C. 33) only. In the remaining three cases the spine of Civinini and the spina angularis have developed into incomplete foramina (C. 31, Fig. 2). The latter is bilaterally present in one case only. The ages of the four skulls vary between 20-60 years, while one is that of a child.

The porus crotaphitico-buccinatorius has not been found in any case at all.

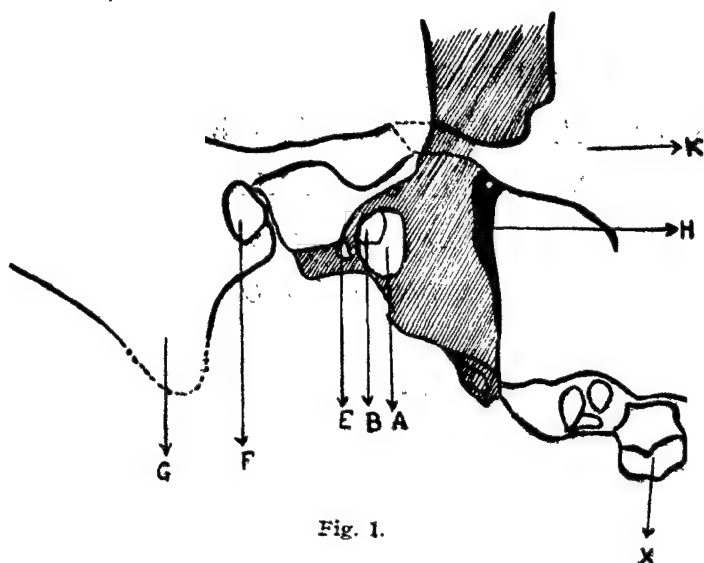


Fig. 1.

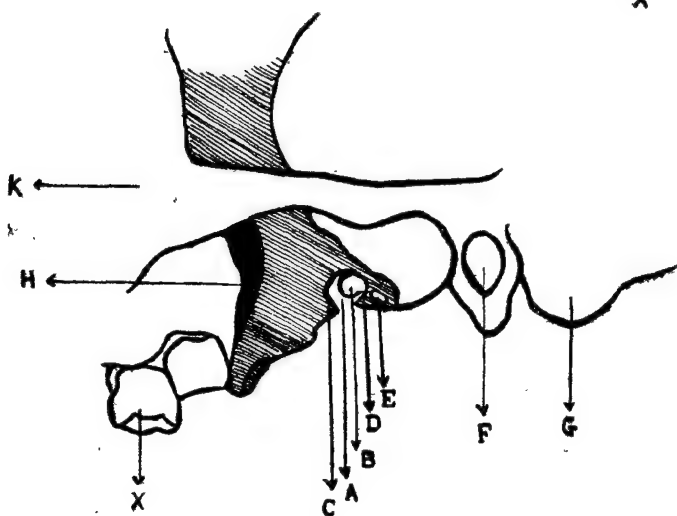


Fig. 2.

A—Foramen of Civinini. B—Foramen Ovale. C—Spine of Civinini. D—Spina Angularis. E—Foramen Spinosum. F—Auditory Meatus. G—Mastoid Process. H—Spheno-Maxillary Fissure. K—Zygomatic Process. X—Molar Tooth.

The foramen of Civinini in Bengali Skulls

Serial No.	Skull No.	Sex	Approx. Age	Side	
				Left	Right
1	C 26	Male	30	incomplete	complete
2	C 1	Male	20	"	—
3	C 32	Male	60	"	—
4	C 33	Female	25	—	complete
5	C 31	?	Child	incomplete	incomplete

Chouke (1946) has studied these characters in American Whites and Negroes. He found their frequencies to be 10·70% and 2·78% respectively.

Osman Hill (1941) has noted the changes in the pterygoid plates and the presence of the spine of Civinini in 6 out of 68 Vedda skulls. It appears, he has not found any complete foramen of Civinini. Osman Hill is probably the first to point out this character in Indian crania and specially among the Veddas who perhaps form the basic stratum of the Indian aborigines.

Thanks are due to Prof. K. P. Chattopadhyay for allowing the writer to work on the Contai skull collection of the Department of Anthropology, University of Calcutta.

Summary

The foramen of Civinini has been observed in 5 cases in a collection of 80 skulls collected from Contai, Midnapore, during the famine of 1942-43. The porus crotaphitico-buccinatorius was not found in any of the skulls. Osman Hill found 6 skulls with notable changes in the pterygoid plate in a collection of 68 Vedda skulls.

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BLOOD GROUP INVESTIGATION IN THE 24 PARGANAS DISTRICT, WEST BENGAL*

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Introduction

DURING the field-season, October 1949 to March 1950, blood group investigations were carried out by the author among the various castes of the following villages in the district of 24 Parganas, West Bengal: Sarisha, Kalagachi, Kamarpole, Mathur, Mankhand, Khordo, Amina, etc. Of these, the first two villages were selected for intensive study. The villages are situated in the Diamond Harbour Subdivision and located around the highway that connects the latter town with Calcutta. The villages were within five miles of Kalagachi-Sarisha, our field headquarter.

The majority of the data was obtained by means of house to house visits. A part of the data was collected from a few secondary and primary schools in the area, where sometimes two sibs were taken. In the former case, only three members, two parents and one child, were tested. Persons not belonging to the above villages were excluded.

Method

Agglutination tests were carried out by the usual slide method with the grouping sera obtained from Haffkine Institute, Bombay. Frequent checks were made by grouping the blood of known persons in our camp. In all cases washed red corpuscles were tested. A hand centrifuge was used for centrifuging the r.b.c.

Data

Altogether 1023 individuals were grouped from this area. Their blood group composition is shown in Table I.

Read at the Section of Anthropology and Archaeology, Indian Science Congress, Hyderabad, January, 1954.

TABLE I

Blood group data collected in the Sarisha—Kalagachi area, with blood group frequencies, gene frequencies, and the values of D/σ.

Caste	No.	A				B		AB	p	q	r	D/σ
		Num- ber.	Percentage.	Num- ber.	Percentage.	Num- ber.	Percentage.					
Brahmin	100	28	28.00	38	38.00	27	27.00	7	7.00	.283	.212	.529 1.07
Kayastha	139	53	38.13	28	20.14	49	34.53	10	7.20	.145	.234	.617 0.13
Mahisya	277	95	34.30	63	22.74	99	35.74	20	7.22	.169	.251	.585 0.68
Pod	133	34	25.56	19	14.29	62	46.62	18	13.53	.125	.344	.505 1.47
Muslims	128	36	28.12	28	21.88	53	41.41	11	8.59	.176	.303	.530 0.66
Bagdi	38	9	23.68	10	26.32	18	34.21	6	15.79	.220	.274	.486 0.50
Kaora	78	21	26.92	20	25.64	30	38.46	7	8.98	.206	.344	.519 2.30

This particular area is predominantly settled by the Mahisyas and the Pods or Paundra-kshatriyas, who form 13·8% and 60% respectively of the total Bengali population in this area. The Mahisyas are mainly agriculturists and distributed in every village. The Paundra-kshatriyas are mostly day-labourers, though a few of them possess some land. The upper castes, such as Brahmins and Kayasthas, are numerically less and are mostly confined to the two villages of Sarisha and Kalagachi, with a few families extending into the village of Kamarpole.

The Muslims are distributed in the villages of Kamarpole, Naosha, Chandnagar, Mohonpur, Basantpur, etc. The group "Other Castes" comprise several castes who are too few numerically to be classed separately. They include the following castes: Muchi, Napit, Jugi, Swarnakar, Tanti, Gope, Khátrya, Kumar, and Vaishnab. Their blood group frequencies are given in Table II.

Discussion

It will be seen from Table I that the Paundra-kshatriyas show the highest percentage of B (46·62%) while the lowest percentage of B (27%) has been found among the Brahmins. The percentage of B among the former is probably the highest so far found in North India. Macfarlane (1938) and Sarkar (1936-37) found 44·44% of B among the same caste, although their sample consisted of only 45 individuals. It is worthwhile to enquire more about this people, since this caste has the highest population among the agricultural castes of South Bengal.

Contrary to the high B of the Paundra-kshatriyas the percentage of A among them is remarkably low (14·29%). The Mahisyas who appear to be physically akin to the former show 35·75% of B and 22·74% of A. The Paundra-kshatriya sample is differentiated from the Mahisyas in having a high percentage of AB (13·53%) as compared with 7·22% of the Mahisyas. The Paundra-kshatriya sample also shows the highest value of D/σ (1·47) in comparison with 0·58 of the Mahisyas. In Bengal, this high heterozygosis was known to be a characteristic of the Bagdis, as will be evident from the data of Sarkar and Macfarlane, and the same among the Paundra-kshatriyas of the

TABLE II
Blood group frequencies of the groups comprising 'Other Castes'. Percentile frequencies are given of first three castes only.

Caste.	No.	O		A		B		AB	
		Num- ber.	Percentage.	Num- ber.	Percentage.	Num- ber.	Percentage.	Num- ber.	Percentage.
Muchi	30	7	23.3	8	26.6	13	43.3	2	6.6
Napit	22	5	22.7	6	27.2	10	45.4	1	4.5
Jugi	21	4	19.4	10	47.6	4	19.0	3	14.2
Swarnakar	19	7	—	1	—	9	—	2	—
Tanti	16	2	—	2	—	9	—	3	—
Teli	9	2	—	2	—	4	—	1	—
Gope	8	2	—	1	—	4	—	1	—
Khattrya	8	1	—	1	—	1	—	—	—
Kumar	1	—	×	—	×	1	—	—	×
Vaishnab	1	—	×	—	×	1	—	—	×
Total—	130								

present sample, may be due to some common source. The Paundra-kshatriyas are considered to be somewhat lower than the Mahisyas in the social scale, and it would be worthwhile to enquire into two independant samples of the above two castes, each shred of any influence of intermixture of the other to find out the clear genetic position. The Mahisyas form the largest (2,381,266) of the castes of Bengal, according to the Census of 1931 ; the maximum density being in the district of Midnapur (883, 367). In South Bengal the Paundra-kshatriyas on the other hand form the dominant population (60%).

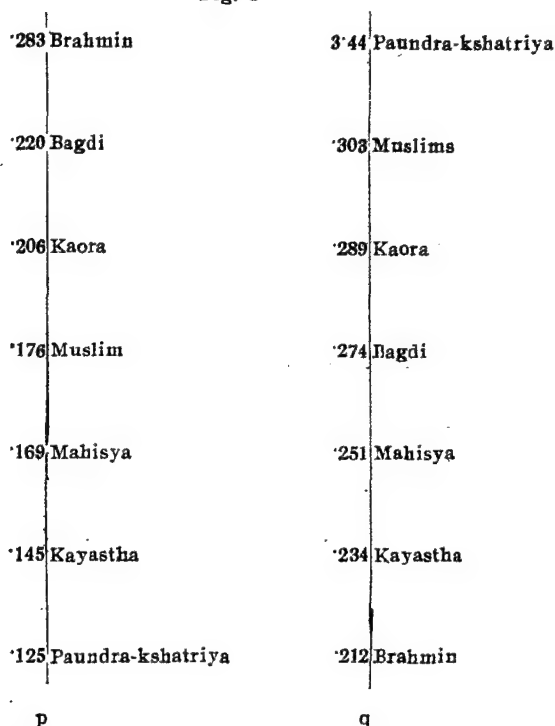
The two upper castes, Kayasthas, and Brahmins, stand wide apart. Among the Kayasthas, A has been found to be only 20·14% as compared with 38% of the Brahmins. The Brahmins have a lower content of B (27%) as compared with 34·53% among the Kayasthas. Thus the Brahmins are characterized by the highest A and the lowest B of the locality, while the Kayasthas are the second lowest in A of the locality and are nearer to the Mahisyas in this respect. The Bagdis and the Kaoras are both characterized by high B and low A. The Bagdi data consist of only 38 individuals and show the highest percentage of AB (15·79). The Kaoras comprise 78 individuals but do not present the high heterozygosis typical of the Bagdis.

The Muslims are a minority in this area. They are mostly local converts and show the second highest B of the locality. The percentage of A is 21·88, in which it stands fairly close to the Mahisyas and Kayasthas.

In Fig. I all the castes discussed above have been arranged into vertical gradients of the two genes p and q, to assess their position in the hierarchy of caste. It will be seen that the range of the gene p varies from ·125 in the case of the Paundra-kshatriyas to ·283 in the case of the Brahmins, while the gene q varies from ·212 in the case of Brahmins to ·344 in the case of the Paundra-kshatriyas. Thus the range of variability of p gene is ·158 units as compared with ·132 of the q gene ; they are, so to say, the distance between the Paundra-kshatriyas and the Brahmins in the two scales. While the range of variability is greater in respect of the p gene than that of the q

Gradients of p and q arranged in descending order.

Fig. I



gene it agrees well with reference to a few castes only. Thus the distance between the Bagdis and the Brahmins are .063 and .062 for p and q respectively and that between the Bagdi and the Kaora .014 and .015 for p and q respectively. Thus the Brahmins are almost exactly equidistant from the Kaora and the Bagdi in respect of the two genes and this fits in very well with our idea of caste hierarchy, in which the Kaoras and the Bagdis form one end of the social scale while the Brahmins the other. The same is also true of the Kayasthas who are also almost equidistant from the Kaoras in respect of both the genes.

The whole phenomenon becomes extremely complex when we find that the Paundra-kshatriyas stand at the farthest distance from the Brahmins while the Bagdis and the Kaoras occupying medial position stand closer to the Brahmins. The

TABLE III

Blood group data collected by the present author compared with other available data of the same groups.

Caste	No.	A				B		AB		p	q	r	D/σ	Authors.
		Num-ber.	Per-cent- tage.	Num-ber.	Per-cent- tage.	Num-ber.	Per-cent- tage.	Num-ber.	Per-cent- tage.					
Brahmin	100	28	28.0	38	38.0	27	27.0	7	7.0	.283	.212	.529	1.07	Sen
Brahmin	125	44	35.2	37	29.60	37	29.60	7	5.6	.212	.212	.593	1.00	Macfarlane (Sarkar, 1942-43)
Brahmin	201	76	37.81	40	19.90	71	35.32	14	6.97	.145	.240	.615	0.01	Greval and Chandra (1940)
Kayastha	139	53	38.13	28	20.14	49	34.53	10	7.20	.145	.234	.617	0.13	Sen
Kayastha	149	53	35.57	29	19.46	60	40.27	7	4.70	.146	.265	.586	0.50	Greval and Chandra (1940)
Kayastha	200	64	32.00	46	23.00	75	37.50	15	7.50	.176	.268	.566	0.70	Macfarlane (Sarkar, 1942-43)
Mahisya	277	95	34.30	63	22.74	99	35.74	20	7.22	.169	.251	.585	0.68	Sen
Mahisya	160	52	32.50	32	20.00	63	39.40	13	8.10	.154	.278	.571	0.50	Macfarlane (1938)
Paundra- kshatriya	133	84	25.56	19	14.29	62	46.62	18	13.53	.125	.344	.505	1.47	Sen
Paundia- kshatriya	45	14	31.11	8	17.78	20	44.44	3	6.67					Macfarlane (1938)
Muslim	123	36	28.12	28	21.88	53	41.41	11	8.59	.176	.303	.530	0.66	Sen
Muslim	120	34	28.3	28	23.30	48	40.00	10	8.30	.187	.294	.532	0.20	Macfarlane (1938)
Muslim	136	45	33.10	40	29.40	42	30.90	9	6.60	.216	.225	.575	0.90	Macfarlane (Sarkar, 1942-43)
Bagdi	38	9	23.68	10	26.32	13	34.21	6	15.79	.220	.274	.486	0.50	Sen
Bagdi	107	32	29.91	26	24.23	38	35.52	11	10.28	.189	.262	.547	0.10	Sarkar and Macfarlane (Sarkar, 1942-43)

Brahmins are closer to the Kayasthas only in respect of gene q, otherwise they form almost a separate group. They are closer to the Mahisyas in respect of both the genes p and q, while they occupy an intermediate position between the Paundra-kshatriyas and the Mahisyas in gene p.

It is thus difficult to interpret the present data in the framework of social hierarchy, but the central position of the Bagdi-Kaora group in respect of both the genes is very well brought out. How far they have influenced the formation of the other castes can only be brought out by further genetic studies.

Comparison with other data

Greval and Chandra (1940) and Macfarlane (1938) have already published some data on Brahmins, Kayasthas, Pods and Muslims, while Sarkar (1942-43) and Macfarlane have published the same on Bagdis. These are presented in Table III.

The present Brahmin sample has been collected from a local area from amongst the families, 90% of whom are Rarhi Brahmins, while the Brahmin sample of Macfarlane and that of Greval and Chandra were collected from hospitals. In comparing the Brahmin data it is seen that Greval's values show the highest O (37.81%), the highest B (35.32%) and the lowest A (19.90%) of the three samples. Macfarlane's sample differs from Greval's in having 29.60% of A. Macfarlane has found 29.60% B in comparison with 35.32% B of Greval and Chandra. They only agree in the percentage of O. The present author's sample is differentiated from both the above samples and this is possibly due to the present data being collected from a local area in comparison to the heterogenous nature of the samples of Greval and Chandra and that of Macfarlane. Sarkar (1942-43), however, found from the χ^2 values the undifferentiated nature between the two samples of the previous authors ($\chi^2 = 4.20$, $P = 0.24$). As such, the two samples have been pooled together and the χ^2 values with the present author's sample yields a value of $\chi^2 = 8.52$, $P = .04$, which show the differentiated nature of the two samples.

Coming over to the Kayasthas we find that Greval and Chandra have found the highest of B (40·27%) and the lowest of A (19·46%) among the Kayasthas, while Macfarlane has found 37·50% of B and 23·00% of A. The present author's value of 20·14% of A and 34·53% of B stands in between the above two authors' values. The present author has found the highest of O (38·13%) which Greval and Chandra found to be 35·57% and Macfarlane 32·00%. The undifferentiated nature of the two Kayastha samples of Greval and Chandra and that of Macfarlane has already been pointed out by Sarkar, and that they are also undifferentiated from the present author's sample will be evident from the values of $\chi^2 = 1·30$, $P = 0·73$.

Macfarlane (1938) has provided the blood group data of the Mahisyas. These were collected from near Budge Budge and shows a fair degree of agreement with those of the present author as will be seen from the χ^2 values : $\chi^2 = ·91$, $P = ·82$.

The Paundra-kshatriya sample of the present author, as has been already pointed out, shows the highest percentage of B (46·62%) and compares very favourably with 44·44% of B found by Macfarlane and Sarkar from a small sample of 45 individuals. They are also fairly in agreement with the percentages of O and A, and that both are undifferentiated will be evident from the χ^2 values : $\chi^2 = 2·02$, $P = 0·57$. The present investigation, therefore, supports the findings of Macfarlane and Sarkar that the Paundra-kshatriyas contain in them the highest element of the gene q which may have also influenced the neighbouring castes.

Macfarlane has also provided two sets of data of the Muslims and that all three samples are in agreement with one another will be evident from the χ^2 values (Table IV). The Bagdis were previously studied by Sarkar and Macfarlane. Their data comprise a number of individuals from one village (Narbari) near the present author's field of study. Although only 38 samples were taken, the blood groups are in agreement with those of the previous authors. The χ^2 values of 1·16, $P = ·76$ show the undifferentiated nature of the two samples.

The Kaoras have been grouped for the first time. They stand in the lowest social scale, even below the Bagdis. They

are almost a dying community and can be found only in localized areas. The frequency of p and q agree very well with that of the Bagdis and the values of $\chi^2 = .57$, $P = .9$ shows that the two groups, namely, Kaoras and Bagdis (present data 38 + 107 of Sarkar and Macfarlane), are undifferentiated in nature.

The above comparisons are arranged below in the form of a table.

TABLE IV

Values of χ^2 and P of the comparative data

	χ^2	P	Remarks
Brahmin, (Macfarlane and Greval & Chandra ; pooled data) & Brahmin (Sen)	8.52	0.04	Differentiated
Kayastha (Macfarlane and Greval & Chandra ; pooled data) & Kayastha (Sen)	1.30	0.73	Undifferentiated
Mahisya (Macfarlane) & Mahisya (Sen)	0.91	0.82	Undifferentiated
Paundra-kshatriya (Macfarlane) & Paundra-kshatriya (Sen)	2.02	0.57	Undifferentiated
Muslims (Macfarlane; pooled data) & Muslims (Sen)	0.19	0.80	Undifferentiated
Bagdi (Sarkar and Macfarlane) & Bagdi (Sen)	1.16	0.76	Undifferentiated
Bagdi (Sen, Sarkar and Macfar- lane ; pooled data) & Kaora (Sen)	0.57	0.90	Undifferentiated

Summary

Altogether 1023 blood samples were taken by the author from the rural population of Sarisha-Kalagachi area near Diamond Harbour, 24 Parganas, South Bengal. These comprise the following endogamous groups: Brahmin (100), Kayastha (139), Mahisya (277), Paundra-kshatriya (133), Bagdi (38), Kaora (78), Muslim (128) and a heterogenous group, "Other Castes" (130).

The genes p and q have been arranged in gradients of descending order to assess their position in the hierarchy of castes.

The present data have been compared with previous data from the same territory.

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MISCELLANEOUS NOTES

THE PILTDOWN MYSTERY

The discovery of the Piltdown remains in 1912 by Dawson brought about a revolution in the theory of the evolution of *Homo sapiens*. It pushed back the ancestry of *Homo sapiens* to a date earlier than that of the Neanderthals. Dawson placed it in an early part of the Pleistocene period. He was to some extent supported by Woodward and Keith. On the other hand there were others who doubted the combination of an ape-like jaw with a man-like skull. Pioneer among them was Prof. Waterston. He pointed out that the glenoid fossa of the temporal bone is not formed to fit the ape-like jaw. He was followed by the American mammalogist G. Miller (1915) who considered the jaw to be that of a Pleistocene species of chimpanzee and named it *Pan Vetus*, and in this he got the support of Gregory. Boule also was struck by the slight traces of wear and tear in the skull bones while the mammalian bones found in the same horizon were considerably eroded. This made him sceptical about the nature of the deposition. He considered it to be composed of two creatures—*Homo dawsoni* and *Troglodytes dawsoni*. Although along with his English colleagues he placed it in the Lower Pleistocene, he was not fully convinced even after the second discovery. So he concluded with the remark "that here we have an example of that imprudent rashness which desires at whatever cost to glean from an unsatisfactory palaeontological relic more than it could possibly yield" (p. 172).

Since then Piltdown remained a mystery till 1950, when Oakley and Hoskens showed by fluorine test that Piltdown remains were Upper Pleistocene (Last Interglacial) and other specimens of *Eoanthropus*, including fragments of Skull II found two miles away, are contemporaneous. But it was reserved for Dr. J. S. Weiner, Dr. K. P. Oakley and Prof. W. E. Le Gros Clark to fully unravel the mystery about Piltdown man. At the instance of the British Museum (Natural History) in

conjunction with the Department of Anatomy, University of Oxford, they carried out their tests and other investigations in the Department of Geology and Mineralogy of the British Museum, in the Department of Anatomy and the Clarendon Laboratory, University of Oxford, and in the Department of the Government Chemist, London. In the absence of any other specimen in Upper Pleistocene, they were confronted with the difficulty of conceiving of such a curious creature as Piltdown man. Further, there was another difficulty of conceiving of the existence of an ape with the earliest fauna of beavers in the Upper Pleistocene. These considerations led Weiner to suggest to Oakley and Clark that there had been a deliberate fake. Further, he demonstrated that by artificially abrading and staining, chimpanzee teeth could be made to simulate the molar and the canine of Piltdown man. This led them to examine the Piltdown teeth more minutely. On careful examination they found definite evidences of abrasion, both on the molar and the canine. On X-ray examination it was found that the dentine had been exposed but there was no secondary formation in its place, as is usually the case if wear is during lifetime. The jaw and the occipital fragment of Piltdown II have also been found to be artificially stained. But while the skull fragments are deeply stained, the staining in the case of the jaw is superficial and is exposed by drilling. The mystery was finally and conclusively exposed by fluorine test. The remains are found to differ in fluorine content. The skull fragments of Piltdown I and the frontal bone of Skull II have fluorine contents 0.1% (which is the minimum for local U. Pleistocene bones) and with less organic contents. They may, therefore, be assigned to the Upper Pleistocene. But the jaw, molar and canine of Piltdown I and the molar and occipital bone of Piltdown II with less fluorination fall in a different group and may be considered to be modern.

Nay, this is not all. The so-called implements found along with the remains, have also been critically examined. Mr. E. T. Hill of the Clarendon Laboratory, Oxford, has pointed out that the triangular flint recovered *in situ* is also

chromate-stained. The original greyish colour is exposed when the staining is dissolved chemically.

Thus the artificially abraded appearance of the molar and the canine, together with the variable shades of chromate staining of bones and artefacts demonstrate that it is not only modern but fraudulent as well.

Thus the conspiracy round Piltdown being exposed, they (Piltdown I and II) should be eliminated. We have now no ground for believing that *Homo sapiens* has a hoary antiquity. They are rather of late origin and Weidenreich's theory of human origin may be taken to be near the truth.

The elimination of Piltdown from the field gives us one lesson, and that is that we should never base our theory on specimens which do not include at least part of the brain case, some and portion of the face and jaw.

T. C. Ray Chaudhuri

A LETTER

To

The Editor,
Man in India.

Dear Sir,

The following resolution was unanimously passed at a meeting of the staff of the Department of Anthropology, University of Calcutta, held on the 18th of December, 1953, in the University College of Science, 35 Ballygunge Circular Road, Calcutta. It is forwarded to you for favour of publication.

Members Present :

Prof. K. P. Chattopadhyay (Ex-President, Section of
Anthropology and Archaeology, Indian
Science Congress).

Mr. T. C. Das (Do.)

Mr. T. C. Ray Chaudhuri (Do.)

Mr. G. S. Ray (Ex-Recorder, Section of Anthropology and
Archaeology, Indian Science Congress)

Dr. M. N. Basu (Do.)

Prof. M. L. Chakraborti

Mr. N. K. Bose (Ex-President, Section of Anthropology and
Archaeology, Indian Science Congress)

Mr. D. Sen (President, Section of Anthropology and
Archaeology, Indian Science Congress)

Resolution :

Whereas there is a large tribal population in the Republic of India, and their proper administration and acculturation is vital to the welfare of the nation, it is essential that

- (a) all tribal administrators, welfare officers and social workers be trained in anthropology and sociology ;
- (b) that there should be reasonable uniformity in the standard of the M. A. and M. Sc. courses in Anthropology in all Universities ; and that there should be arrangements for compulsory practical training in the laboratory, in the museum and in the field for students for the Master's degree ;
- (c) that the work of the Department of Anthropology, Government of India, be properly co-ordinated with the work of other research and teaching bodies, and for this purpose, be placed under an Advisory Council consisting of representatives of the major Universities teaching Anthropology, besides Government officials.

This has been done for the Archaeological Survey of India, with conspicuous success.

Yours faithfully,

K. P. Chattopadhyay,
University Professor and Head
of the Dept. of Anthropology.

BOOK REVIEWS

Colour and Culture in South Africa : A study of the status of the Cape Coloured People within the Social Structure of South Africa. By *Sheila Patterson*. Routledge and Kegan Paul, London, 1953. 30 shillings., pp. 402, including notes, bibliography, appendices and index.

This is a sociological study of a large group of people in South Africa known as the Cape Coloured, who are the product of mixed unions, mainly irregular, between Europeans and slaves, Europeans and Hottentots, slaves and Hottentots. The original hybrid groups have been perpetuated, increased and further intermingled by endogamy and cross-breeding and by additions from the original strains. Recently the strength of the Cape Coloured has been enhanced and its composition diversified by European Bantu, Coloured Bantu and Coloured Indian crosses and in addition by innumerable casual contacts with Europeans of all nations. The group consists of a series of sub-groups lacking common ethnic, cultural and historical antecedents.

In South Africa democracy works only for the white man. There is a limited franchise for the Cape Coloured and only four seats have been provided for them in the Lower House of the Union Legislature with the threat that they would have to go if they did not "see things in the broader interests of the country". All coloured people are excluded from public services, military service etc. The laws and regulations formed by a white parliament are administered by a white bureaucracy and by a mainly white police force. Justice is also dispensed by a white judiciary and if the coloured choose to be represented in court, it must be through a white counsel. So in the administration of law the Cape Coloured are discriminated against. This produces a feeling among them that the law is the "white man's law" and undermines his faith in it. Law perpetuates and strengthens class differentiation.

Economic discrimination in South Africa is the result of a fear-complex generated among the whites by the existence of a large non-white population. The entire economic structure is based on cheap non-European labour. Because of his colour, the coloured man is being increasingly forced by prejudice and apartheid legislation away from the white group, with which he has always identified himself, into the black group of the economically exploited. As coloured and Africans are gaining experience and efficiency as skilled workers, customary discrimination is being rigorously enforced by whipping up racial prejudice.

In the field of education alone there is a hope of redemption. Coloured education in South Africa has gone beyond the stage of "training for helotry" to a point where efforts to halt, divert or reverse it by the dominant group will be of no avail. Failing to get into other professions most of the educated coloured people go into the teaching profession from where they disseminate their bitterness and frustration.

Social welfare services for the Cape Coloured are faced with the impossible task of trying to relieve the injustices and inequalities of the existing socio-economic system. Their function is palliative rather than rehabilitative. The social security measures fail almost completely to alleviate the grave social insecurities in which the vast majority are born, exist and die.

The worst form of racial discrimination practised is spatial segregation. This is not applied to the Cape Coloured in the same degree as to Africans and Indians, but municipal housing schemes in Cape Town and other areas are clearly aimed at increasing residential segregation between European, Coloured and African. This segregation does not end with the grave. Cemeteries too are segregated. Even in heaven or hell these whites could be put out to find no colour bar. While church leaders constantly urge the need for a more Christian attitude and condemn retrogressive and oppressive measures against Cape Coloured, the majority of the white church-goers do not believe that the brotherhood of man includes non-white. With the increased acculturation of the coloured group, the stress

in discrimination has shifted from the economic to the social sphere. For the sake of racial purity even social intercourse with them has been tabooed.

The three major reactions to the imposition of a status hierarchy by a dominant group, viz., acceptance, avoidance and aggression are evident in the case of the Cape Coloured. The most complete form of acceptance of social hierarchy is found among the rural coloured of all classes and many among the labouring classes. Cases of avoidance are few but attempts to pass as white may be classed as such. Aggression takes the form of waste of time and materials while at work, petty thieving and to individual outbursts of violence.

It is a pity that Mrs. Patterson confined her attention to the study of and discrimination against the Cape Coloured only. It would have added greatly to the value of this work if she could have included the study of the African and Indian coloured also. The study of colour and racial prejudice in South Africa cannot be complete without a consideration of the relation between whites and Africans and Indians and the Cape Coloured. Still, within its limited sphere, this valuable contribution to the study of race relations in South Africa is most welcome.

The author would have done well to elaborate her description of the group stereotypes and of social tension between the Cape Coloured and the whites.

A notable feature of the book is that all illustrative and documentary material has been relegated to the footnotes so that the progress of the main argument is not impeded. A little less than half of the bulk of the book is devoted to such notes.

The book is refreshing because it endeavours to show the dynamic aspects of the Coloured-European relations over centuries and to draw a parallel with White-Coloured situations elsewhere, particularly in the United States and Brazil.

Sachchidananda

An Introduction to Anthropology. By *Ralph L. Beals and Harry Hoijer*. The MacMillan Company, New York. 1953. Price \$ 6.

This book is intended to be an elementary textbook of anthropology for undergraduate students. It covers a wide range and includes something on almost all the branches of our discipline. Out of six chapters devoted to physical anthropology, three deal with the various aspects of the question of race and its bearing on culture. Human efforts in the direction of tools, house-building and containers have been detailed in two chapters.

The chapter on kin groups is specially praiseworthy due to the good arrangement of the material on clans and their various functions. In the chapter on marriage a detailed discussion of the problem of incest is very informative and refreshing.

While dealing with political organization, the authors have described various types of primitive political structures. It would have enhanced the value of the book if the authors could have devoted a section to the consideration of sanctions and primitive law. Similarly the chapter on economics misses badly a section on primitive money.

The importance of education in the formation of personality and the socialization of the child has been realized by the authors by providing a separate chapter. The nature of culture in its various aspects has been adequately dealt with. While discussing problems of culture change, the authors have given an outline history of the different schools of cultural anthropology. A consideration of acculturation and the application of anthropology to the solution of problems of the modern world round off the subjects discussed in the book.

The value of this textbook has been enhanced by giving summaries and suggestions for collateral reading at the end of each chapter. The diagrams and illustrations drawn carefully by Dr. Roediger will help students in getting a fuller grasp of the text.

Sachchidananda

Plants, Man and Life. By Edgar Anderson ; Little, Brown and Co. ; Boston, 1952. Price 4 dollars, pp. 245.

This is a book on ethnobotany and the author has acknowledged its "closeness" to Sir George Watt's monumental work, *A Dictionary of the Economic Products of India*. It is not strange, therefore, that India should figure prominently in the book.

Dr. Anderson toured India and lectured in Indian Universities during the winter of 1951. He also toured among the Nagas of Assam for a collection of maize, among whom he found "a fanatical adherence to an ideal type" to preserve the purity, sharply varying from tribe to tribe, of the corn. The author has very ably drawn attention to this neglected branch of a "socially and economically important field" through the medium of this book.

Dr. Anderson has shown how the most common plants, weeds and grasses have been unconsciously and deliberately carried by man around the globe and his maxim "the history of the weeds is the history of man" is well substantiated. The Mediterranean weeds and grasses, carried by the early Spaniards, almost completely obliterated the original vegetation of America. This fact of ethnobotany never occurred either to the diffusionist or the anti-diffusionist when the controversy of culture contacts across the Pacific raged in America. Dr. Anderson has shown how a study of primitive man's door-yard plants, weeds or grasses reveals many important facts of his cultural history, and he has naturally deplored our ignorance regarding the history of the very common plants. Primitive men in Central America plant coxscumb and amaranth in their grain-fields, which anthropologists interpret as meant for magic and for scaring away devils ; but our present knowledge is not enough to decide whether their use as sources of food preceded that of protection against evil spirits. Primitive men discovered most of our drug plants and "all that modern science and technology have done is to be greatly more expert in extracting the drugs, far wiser in understanding and using their effects on the human body. There are five natural sources of caffeine : tea, coffee,

the cola plant, cacao, yerba mate and its relatives. Primitive man located all of these five and knew that they reduced fatigue. Biochemical research has not added a single new source."

The author has set up a method of study with maize and recommends such a study for the tropical palms which "supply food, forage, clothing and building materials and thatch." Gourds have been used by primitive man as dishes, water bottles, floats for nets and rafts as well as for food and great variation between the various cultivated varieties is a study of "monumental undertaking but would yield unique information about the migration of primitive man."

The author has, in Chapter X of his book, published a roster of our most important crop plants and their probable countries of origin. India has the honour of being the original home of ragge (*Eleusine coracana*), sesame (*Sesamum orientale*), cucumber (*Cucumis*), egg plant (*Solanum melongena*), mung bean (*Phaseolus aureus*), urd bean (*Phaseolus mungo*), etc., and a major centre of coffee, pepper, turmeric, pearl millet, rice, sorghum, the mustards, date palm, melon, and cotton (*Gossypium arboreum*). Hutchinson and Stephens believed that cotton was first domesticated in the Indus valley.

The book has all through been written with the true perspective of a scientist without the narrow compartmentalism of a specialist. The author's remarks are very pertinent in these days and the reviewer feels that he can only do justice by quoting a few short paragraphs selected from various portions of the book.

"The importance of fusing anthropological and biological concepts increases tremendously as we work backwards towards the actual origin of a crop plant from its wild or semi-wild progenitors."

"At the present time, anthropologists and applied biologists are so far apart in their thinking, that they seldom realize they have many problems in common."

"It would be a healthy thing for scholarship if these barriers between the humanities and the sciences could be broken down more frequently."

"Discoveries are made not because there is a crying need for knowledge in that art but because someone has a fascinating new technique and young men become intoxicated with the new field of exploration which has been opened up and dash off into it. There are fads in science. A problem which looks humdrum gets passed up for one in which more scientists are currently interested."

The author deserves the congratulation of both botanists and anthropologists and it is hoped that ethnobotany will be utilized to solve the many riddles of Indian anthropology as has been ably demonstrated by Dr. Anderson, who calls himself "the physical anthropologist of the maize plant."

S. S. Sarkar

Mythos und Kult bei Naturvoelkern. By Ad. E. Jensen. Wiesbaden (Franz Steiner Verlag), 1951, pp.423, price DM 24,80.

An approach to the understanding of "primitive religion" is here being made which is as new, in the century-old history of Western European anthropology, as it was common to that of ancient Egypt, China, India or Greece: myths and religious ritual of pre-literate societies and other out-groups are here being taken seriously. They are considered as real approaches to real facts of life; not as the clumsy attempts of child-like and illogically guessing savages, trying to understand life, nor as the aberrations of degenerates, as either of which most other, previously formulated, Western theories interpreted pre-literate religion. Professor Jensen feels that neither of these interpretations does justice to the technological, psychological and, generally speaking, ethical achievements of primitive societies and individuals. He examines his predecessors in the anthropological interpretation of religious concepts, beginning with Tylor, for whom he has great regard, as a revolutionary genius in his days and whose scientific vigour was beyond dispute. Stress is also laid on Tylor's honesty which led him to admit that there are no people known who, though believing in souls, would altogether lack the notion of the divine, as Tylor's animist theory would postulate. Here begins Jensen's major objection to the concept of primeval "animism".

Tylor's theory assumes that early man believed first in the existence of souls, spirits or ghosts and then, searching for them a causative principle, invented the concept of God. This, according to Jensen, is a naive projection of the scientific procedure on pre-literate societies. Tylor himself lived and thought in this scientific mode, but scarcely the "primitives" whom he tried to interpret. Professor Jensen also points out, quite rightly, that such an assumed search for the causative principle runs counter, not only to the spirit, but even to the letter of "primitive" religions, as we know them. In fact, most known religions start with the concept of the divine, to whom the ever-increasing multiplicity of other invisible beings owes its existence. Yet, Jensen quotes and discusses, Tylor's main thesis and observations, which he considers throughout the book as a major contribution to anthropological thought. The author, however, is a little less patient with theory of pre-animist "primitive magism," the most prominent representative of which is Professor K. Th. Preuss whose merits in other fields the author also acknowledges, but whom he accuses of sticking here juvenile theory which presupposes *urdumheit*, a kind of almost incredible stupidity, as the moving factor for mankind's most cherished emotions : religion and art (pp. 252 seq., 406).

The third hypothesis on the origin of religion, Andrew Lang's primordial monotheism, elaborated by P.W. Schmidt and the Viennese School, is valued as the first theoretical attempt to free Western anthropology from its unwarranted bias against the reasonableness and moral maturity of primitive humanity. The author shares on the whole the concept of primeval monotheism. He agrees that early religion must have been the most earnestly and seriously undertaken attempt, undertaken by full-fledged human beings, to understand life and live it humanly. So far so good. But, the author points out, here stopped the appreciative understanding even of the primeval monotheism-theoricians. They attributed reasonableness and reality values to the religious quest of primitive monotheists, but denied the same qualities to the religious concepts of other, polytheistic and pre-literate societies whom they held to be

mental degenerates, sunk in utter ignorance and superstition, but for some survivals from their primaevally monotheistic past.

Professor Jensen denies this allegation on the strength of his own field experience among the Kiwai, Marind-Anim and other East-Indonesian plant-cultivators whom he studied in West Ceram and the southern coast of New Guinea. It is here (pp. 113, *seq.*) that the creative part of Jensen's work begins.

The *Dema*-deities who receive the foremost attention of these Indonesian plant-cultivators are taken by the author as the paradigm for a polytheistic type of divine beings for whom he finds rich parallels in ethnographic descriptions of other cultures, African, American or Oceanic. Parallels with Indian mythology, especially connected with the *soma* complex, though scarcely elaborated in this book (p. 212), are discussed at greater length by the author in another publication on the same theme (*Das Weltbild Einer Fruehen Kultur*, in "Paideuma", Leipzig, Vol. 3, 1944). Discussions of the Eleusian mystero-cults are also incorporated in the present volume (p. 221).

This main part of the work concerned with the *Dema* deities, would have allowed further enrichment and deepening of insight had the author made use of what we know about the matrilineal structure of early plant-cultivating societies, and its socio-religious implications.

Many other religious or semi-religious phenomena in different societies are discussed with the same open-mindedness. Scientific dogmatism so far denied reality values to all experiences which form the basis of shamanism (pp. 284, *seq.*), benevolent or malevolent magic (pp. 302, 307 and especially p. 309), manism and ancestor cults (357 *seq.*), or the attitude towards spirits, ghosts, goblins (p. 369) and similar, for us, at least, invisible beings.

Discussing the theoretical possibility of actual reality values inherent in all these and similar beliefs, the author yet remains well within the limits of scientific neutrality and detachment from credulity. He stresses that the Western approach to such questions, as the actuality of life after death, invisible beings (pp. 350, *seq.*) or factual effects resulting from magic

activities (pp. 369, 373), may never succeed in experiencing and proving the alleged phenomena; but it can also not disprove them, at least, in our present state of experience, positive or negative.

To the Indian reader it may sound a little surprising to find this open-minded author yet excluding astrology from his tolerant neutrality (pp. 321-23), on the ground that this approach to the reality of life was out of tune with contemporary living civilizations.

This book could, on the other hand, provide much useful information in details and, what is more, an altogether new and fruitful approach to the study of many other aspects of Indian religions, contemporary, historic and pre-historic. It is therefore hoped that an English edition may be published soon. Such an edition could with advantage reduce repetitions and perhaps rearrange the text-matter in such a way as to bring important theoretical and critical discussions (pp. 309, 370, 373-74, etc.), now placed at the end, or middle of the book, to its beginning.

These, however, are minor remarks or suggestions, not meant to detract from the importance of this work, namely, the attempt to see the majority of pre-literate men and women as intelligent and successfully living beings, instead of either as semi-human, pre-logic barbarians, or else as superstitious degenerates, sunk in ignorance and evil.

U. R. Ehrenfels

Indian Temples: 135 Photographs chosen and annotated. By Odette Monod-Bruhil, with a Preface by Sylvain Levi; Oxford University Press, Amen House; London, 2nd edition. Price Rs. 15.

The beautiful and discerning photographs contained in the book give us a glimpse of the cultural heritage of India. The pictures of the temples, *stupas*, *gumphas* with their carvings, frescoes and statues depict phases of different religions prevailing in India at different times.

The notes of the author at the end of the volume help the

lay reader to understand the pictures. The learned introduction by the late Prof. Sylvain Levi adds greatly to the value of the book.

H. D. Ghosh

Trends Of Life. By F. Wood Jones, F. R. S., London, Edward Arnold & Co., 1953, price 10s. 6d. net., pp. 191.

Prof. Wood Jones gives in this book a picture of how life has developed. According to him the distinction of living matter is its power of self-maintenance which is manifested in activities that are characteristically directive. Life in its power of self-maintenance is capable of producing directive developments for the satisfaction of its needs. These structural developments and modifications of the living organism in response to functional demands are correlated and harmonious. On this basis, explanations are offered for individual structural peculiarities, such as large ears, a long tongue, loss of body hair, the possession of a proboscis, long legs of certain birds. In the embryonic life there must be always a considerable amount of risk attached to reproduction by laying eggs. To insure against this risk was a paramount need. So the great incidence of the reproductive development in the shape of a maternal broad pouch for the egg. The functional utility of some of the structures at this stage is of short duration, but when the function is gone, no new function is assigned to them. With the change in the habit and habitat of living beings there are structural changes or adaptations by the functional demands of the environment. These acquired characters are inherited. But to become perfectly adapted to an environment is to become a slave to the environment. Thus domestication of animals leads to diminution of intelligence. Man fails to realize that under the conditions of modern western civilization he has also subjected himself to all the influences that domestication exercises upon other animals. There has been great progress in the field of physical and chemical sciences, but there are serious doubts as to whether human wisdom and human morality have advanced in harmony with that progress. That man is likely to develop his intellectual capacities in the direction of higher ethical

standards and increased moral responsibility is more of the nature of a pious hope than a justified expectation. The average intelligence of the masses is possibly on the decline. Thus, the author concludes his book with a pessimistic note and it must be said that he has given us ample food for thinking.

The arguments are supported by a large number of illustrative examples taken from nature. The laboratory biologist and the view that evolution is the result of natural selection from random variation have come in for much criticism in the book.

H. D. Ghosh

Mangal Chandir Git. By *Dwijā Madhava*, edited by *Shri Sudhi Bhusan Bhattacharyya*, M.A. ; *Calcutta University*, 1952.

Mangal Chandi has been for centuries a rural deity worshipped in Bengal, and there were many occasions on which the *nirmalya* of Mangal Chandi used to be touched on the head as a presage to success. Students going out to examinations, men going out on business ventures, litigants setting out for law courts, newly married people beginning their life, had to touch their head with *nirmalya* with reverence. In short, Mangal Chandi was very close to the routine life of ordinary Bengali Hindus. This is true even now of a large tract of Hindu Bengal.

Scholars have been trying to explore the sources of the Chandi cult and Mukundaram Kavikankan's composition of the poem has been generally taken up as a text and subjected to scrutiny. Older texts have been also laid under contribution; and a scholar who has been well read both in Bengali language and literature and also in anthropology has now come forward with an edition of the songs of Mangal Chandi composed by Madhavananda, a contemporary of Mukundaram. He has shown how from the 14th century to the 17th century Mangal Chandi was a combination of Saraswati, Mahishamardini and Gaja-Lakshmi. Mangal Chandi cult as we know it in Bengali, had its vogue from the 14th to the 18th century, to be developed later into the Annapurna cult familiar to readers of Bengali through Bharat Chandra's Annadamangal. Dwija Madhava's work as embodied in the edition under review is

not inferior to Mukundaram's better-known Chandi Mangal. According to Shri Bhattacharyya it has a further claim on our attention on account of important suggestions which it throws out regarding the influence of the Tantras on the cult. Indeed, his contention is that while Mukundaram has presented Mangal Chandi in a Pauranic environment, Dwija Madhava has taken the help of Tantras right from the beginning in developing his story. The eight days of the celebration of Mangal Chandi worship used to be accompanied by the chanting of the poem which had to be divided according to Dwija Madhava into 14 parts or palas. The editor has taken the liberty of dividing it into 16 palas, but there is no valid reason for doing so. The factual rather than the theoretical division should have been retained. The change has not, we are afraid, resulted in any improvement. The author Madhava is properly relegated to the later half of the 16th century and is thus a contemporary of Mukundaram. The question has been asked by the editor whether Madhava belonged to West Bengal or was a native of Chittagong. The author has suggested an explanation which is however not convincing. We are as wise as we had been.

Shri Bhattacharyya has compared a number of manuscripts and has carefully edited the text. A glossary would have been welcome as well as a note on the different *ragas* used in the text ; as he says in the introduction, word-notes would have been superfluous, in view of the detailed notes on grammar given in the introduction, but an index of words would have added to the value of the edition.

The text is valuable, because it shows the *kavya* in a fluid condition which is not to be found in Mukundaram's work where the poetical framework is more hard. That is indicated in the difference of the titles of the two books, and that is also the reason why Dwija Madhava's work will appeal more to people interested in folk literature. Shri Bhattacharyya has devoted to the book a number of years, and it is a matter of congratulation that he has produced a text admirably printed and apparently free from mistakes.

The Holy Lake of the Acts of Rama, an English translation of Tulsi Das's Ramacaritmanasa. By W. Douglas P. Hill, M. A., Formerly Scholar of King's College, Cambridge; Oxford University Press, 1952. Price Rs. Fifteen only.

The work of Tulsidas has been given a high place—one may call it the highest—in Hindi literature, and its position among a large number of inhabitants of North India is just like that of the Bible among the Christians. A classical work like Ram Charit Manas deserves to be translated again and again to adjust itself to the new language that grows with the growth of man. We welcome this translation, therefore, and would make no comments about the contents or language of the translation on which, as admitted by the translator, he has followed the Gorakhpur text, but we would make the following observations on certain points.

(1) On page 510 and elsewhere the translator has used the expression "the rape of Sita". The word *rape* no doubt meant originally the act of mere seizure by force, but it has become so much associated with the criminal act of sexual intercourse that it should not have been used in the present context. I am sure it is bound to offend and repel readers of the Ram Charit Manas who cherish in their heart of hearts the idea that the real Sita was not so much as even physically touched by Ravana, but that a substitute, an unreal being, a shadow, was placed in her stead and carried away by Ravana. The word "rape" therefore seems to be very unhappy and one might even say inappropriate.

(2) Regarding the notes in the Appendix, Govinda is not exactly a cow finder, but cow 'keeper'—one who protects the cows or the cow, in the world.

(3) In the legend of Harish Chandra, the great seeker of Truth sold himself and his wife and also his son.

(4) On page XII the name of the book is not Bhaktamala, as has been wrongly put, but Bhaktamal.

Bazar Paintings of Calcutta. By W. G. Archer. Victoria & Albert Museum and H. M. Stationery Office, London. Price 8s. 6d.

The subject of this monograph is Kalighat painting. The pictures were painted by the *patuas* or bazar artists of Kalighat, Calcutta and had been produced for sale to pilgrims who flocked to the Kalighat temple. These customers were of modest means and the price of the pictures accordingly varied from a pice to one anna. Naturally minute and laboured delicacy was wanting in these pictures which had to be produced on a mass scale and within a short time. Still there is an exquisite freshness and spontaneity of conception and execution in these old brush drawings. They are not drawn with meticulous perfection and have not the studied elegance and charming sensitiveness of later schools. But there is a boldness and vigour in the brushline. The drawing is made with one long deliberate sweep of the brush.

According to the author of this book, this school of painting originated in the early years of the 19th century. Most of the pictures were originally concerned more or less with the Hindu deities. But the impact of British art resulted in the introduction of subjects from contemporary life. According to the author, from 1800 to 1870, the artists generally tried to assimilate the Anglo-Indian style. From 1870 to 1890 we find a note of criticism regarding the various aspects of social life depicted in the pictures. The last phase of the school occurs between the years 1890 and 1930. Oleographs and printed pictures made hand-painting out of date and by 1930 the school came to an end. But its style exercised ample influence on later painters like Jamini Roy or Gopal Ghose.

The monograph contains excellent reproductions of paintings belongs to the school classified according to the different periods to which they belong. It also gives us a list of these pictures with sufficient explanations for their understanding. There is finally a short catalogue of the Kalighat paintings present in the Indian section of the Victoria and Albert Museum.

H. D. Ghosh

Amazon Town: A Study of Man in the Tropics. By Charles Wagley. Published by The MacMillan Co., New York, 1953. pp. xi + 305. Price 5.00 dollars.

Brazil has long been the hunting ground for explorers, travellers, missionaries and social scientists and a voluminous literature dealing with the country and its people has already been published. But earlier writers like Kostler (1816), Wallace (1853), Agassiz (1896), devoted little attention to human affairs, while later writers like Bates (1930), D. Pierson (1941), A. Candido (1951), R. Bastide (1952), to use Frazer's phrase studied the "flat fragmented" Brazilian. Credit goes to Charles Wagley of the Columbia University who visited this country several times in various capacities and found it to be the world's most exciting laboratory for research in social anthropology. The present work is the result of Dr. Wagley's intensive field investigation in a small Amazon town It'a (a fictitious name) which he conducted under the auspices of the UNESCO Research Project. This is a piece of objective and meticulous research which can equal the works of Firth and Malinowski in point of field investigation.

Dr. Wagley's book is remarkable from various points of view. His is a study of man in the tropics. In one sense, it is a study of the adaptation of man to a tropical environment, a backward and under-developed area (p. 12). But Prof. Wagley does not believe in geographical determinism of the anthropogeographical school and examines the problem of It'a also from historical and sociological angles. He further talks of "tropical technology" to remove the material ills, of the dangers in technical assistance applied without consideration of the human factors which may ultimately cause "cultural lag" (p. 293).

Prof. Wagley, in this book, also draws attention to a theoretical consideration and likes to define social anthropology as a "science of small community" (p. 260). And that is why, if Firth's Tikopia numbered only 1300 people, Dr. Wagley's It'a community consisted of less than two thousand people. On the basis of intensive study of such

limited population groups, he believes, generalizations can easily be made and the "postulation stage" in social anthropology can be initiated.

Besides these general considerations, the volume contains ethnographic details about the people of It'a. Every minute observation regarding their socio-economic and religious life has been carefully recorded, concrete examples and events have been mentioned and relevant statistics have been properly used.

Before we conclude, we may also point out that the author ought to have given the actual name of the town where he carried out the field investigation instead of giving a fictitious name. If anybody likes to study this very town it will be difficult for him to trace the place. Secondly, the title of the book seems to be misleading, as the materials of the book consist not only of an Amazon town but have also been gathered from rural life, while in many chapters the regional culture has received a comparatively exhaustive treatment.

The book is a well-produced document of considerable interest and is likely to initiate new thinking, both among administrative personnel and social scientists.

L. P. Vidyarthi

Science and Human Behaviour. By B. F. Skinner. Published by The MacMillan Co., New York, 1953; pp. 461. Price 4.00 dollars.

We welcome the second book of B. F. Skinner as a valuable contribution to psychological literature, especially of the Behaviourist School. In his first book, *The Behaviour of Organism*, Skinner threw light only on the psychological implication of behavioural pattern in relation to the organism. But in the present book, he has not only been able to discuss a science of human behaviour from the psychological standpoint, but has also considered the cultural factors in detail in the formation and control of human behaviour. And owing to this, his study lies at the meeting point of

three long-established scientific disciplines, namely, psychology, sociology and anthropology.

At the very outset, Skinner appreciates the methods of science wherever they have been applied. But he is aware of the uneven development of science and opines that "by seizing upon the easier problem first, it has extended control of inanimate nature without preparing for the serious social problems that follow". He is convinced that humanity is facing all-round destruction at the cost of science, because the science of human nature is not keeping pace with the march of the science of nature.

He opines that the science of human behaviour is in transition. The traditional philosophy of human nature has neither been abandoned nor, at the same time, has a scientific point of view been adopted. He vehemently criticises this patchwork in the study of human behaviour and puts forward a "causal or functional analysis" of behaviour. According to him, the materials to be analysed in the science of behaviour come from (1) casual observation, (2) controlled field observation, (3) clinical observation, (4) extensive observation in industrial, military, and other institutional research, (5) laboratory studies of human behaviour, (6) laboratory studies of the behaviour of animals. But at the same time he accepts that experimental research on human behaviour is sometimes not as comprehensive as one might wish.

The book has been divided into six sections. In the first section the possibility of developing a science of human behaviour has been examined. The second section contains a classification of the variables of which behaviour is a function and a survey of processes through which behaviour changes when one of these variables is changed. The third section provides a broader view of the organism as a whole. Certain complex arrangements are considered, in which one part of the behaviour of the individual alters some of the variables of which other parts are a function. In section four, an analysis of the interaction of two or more individuals in a social system has been presented. One

person is often part of the environment of another and this relationship is usually reciprocal. An adequate account of a given social episode explains the behaviour of all participants. The fifth section analyses various techniques through which human behaviour is controlled in government, religion, psychotherapy, economics and education. In each of these fields, it has been shown, the individual and the controlling agency constitute a social system. The last section surveys the total culture as a social environment and discusses the general problems of the control of human behaviour.

The plan is obviously an example of extrapolation from the simple to the complex. Numerical data have been avoided, but the author has made an earnest effort to define each behavioural process rigorously and to exemplify each process or relation with specific instances.

The commonest objection to a thorough-going functional analysis is simply that it cannot be carried out, but the only evidence for this is that it has not yet been carried out. Scientists need not be discouraged by this fact. Human behaviour is perhaps the most difficult subject to which the method of science has been applied, and it is natural that substantial progress should be slow.

L. P. Vidyarthi

The "Why" of Man's Experience. By Hadby Cantril, Professor, Department of Psychology, Princeton University, New York. The MacMillan Company. pp. xi + 198.

The author points out in the preface that men living in the modern world come, often and anon, face to face with problems for which they are in dire need of some directive or guidance. According to him, psychology, while focussing its research on isolated facts, viz., sensation, deviations from normal life, or differential human capacities, has in a manner failed in giving any help in the understanding of normal life with its joys, sorrows, hopes or frustrations.

He attributes this failure to the lack of an adequate viewpoint. He therefore wants to set down a new approach about the nature of which he says, "In this book I am trying to outline an approach which may help pose problems from a fresh point of view and thereby increase our understanding. It is an approach based on what seems to me the convergence of evidence from psychology, biology, and investigation of man's social behaviour. The approach must, of course, be finally tested against experimental results." As he himself admits, the concepts which form the substance of the book have been elaborated on a theoretical level, though he has made their significance consistent with actual human experience. He has sufficiently emphasized the interdependence of isolated experiences and actions in a dynamic social structure.

An idea of the themes discussed in the chapters may well be obtained if we quote the author who says, "I have begun it (i. e., the narrative) with a consideration of what seems to be most outstanding characteristic, after a discussion of scientific enquiry and the present status of psychology in Chapter I. Later chapters expand the cross-relationships between the most important characteristic of man and other aspects involved in any transaction of life, such as purpose, action, meaning, assumption, social participation, etc.

"The outstanding characteristic of man is his capacity to sense value attributes in his experience and to seek an enhancement of these value attributes through participation in new situations. The standard of value attributes each person uses is influenced by his own unique biological and life history."

The author then proceeds to trace the evolutionary line of development of man's capacities to experience value judgment and to use abstract symbols. He shows how intimately the value attributes inspire man to create and use artifacts, also how in a network of ways man's purposive behaviour and social perception are inter-linked and mutually operative on one another making for onward progress to perfection

and a higher order of efficiency, and subsequently to a new awareness of emergent value attributes which gives a new orientation of the characteristics of man in the transaction of living. There emerges a consciousness of the meaning of the environment and its bearing on the various aspects of man's experience and purposive behaviour.

Man can realize his purpose only through action. Hence the consequences of action have been taken into critical consideration. The author shows how the sense of surety accruing from action lends validity to assumptions which man makes as he carries out his purposes and experiences his value attributes in new sets of circumstances. The sum total of the experiences in this process goes to form the base of the assumptive form world. "Our assumptive form world consists of the total set of assumptions which we build up on the basis of past experiences in carrying out our purposes. Many of the assumptions which compose it are entirely subconscious; others are intellectual abstractions; others concern the value attributes of experience. Those expectancies that serve as a basis for future action are an important aspect of our assumptive form world."

The intricate and subtle ways in which the experiences of purposive action culminating in the abstract formation of the assumptive form world would get incorporated in the personality structure inducing the emergence of the awareness of "me" which makes a dynamic co-ordination and a positive synthesis of the social impulses such as loyalties, desire to be appreciated, etc., are very ably elucidated by the author. He takes care to show that the same principles are at the basis of group formation.

"The extent to which your assumptive world is similar to that of other people depends on the similarity of the indentifications, the loyalties, the expectancies, and purposes which have become a part of you. You and others are "we" in so far as you and others have common assumptions and purposes and in so far as you and others share in the pursuit of the resolution of difficulties which are both individual and common. Only under such circumstances are individual

assumptive form worlds modified in common ways both with respect to their relevance and reliability for action and their creation of enhanced value."

The author proceeds to show finally how participation in group activities enriches the value of experience and paves the way to the possibility of emergent value attributes in new contexts of human existence. The stability and cohesion of the social forces depend on the common sharing of the valuable experiences, born of a common sense of assumptive form world.

All through the book, as the author himself has intended, he undertakes the task of intellectualizing the reason why man's experience seems to be what it is. The development of his central theme, i.e., the experience of the value attributes and the diverse ways by which these are associated with individual and common life is very systematic and consistent. He himself is aware that the concepts introduced by him appear to be metaphysical to-day but he hopes that "such concepts do hold the possibility of eventual scientific understanding".

While one admires the subject-matter of the book so well written, and the vast erudition of the author which he has brought to bear upon its explanation, one cannot help feeling that though in point of fact the author's approach may be considered as a sure improvement and elaboration of the one introduced by the Gestalt School, it cannot essentially be styled as a completely fresh approach in so far as the latter school gave a positive satisfactory explanation of the meaningful experiences of the individual and the group and later the same principles were and are now being advocated and applied to the study of single and corporate life.

However, it goes without saying that it is certainly worth while to put the concepts developed in the book to experimental verification.

Bulletin of the French School of the Far East. *Tome XLVI, Fasc. 1, contains the following articles :*

Studies on Indonesian epigraphy and a list of the principal dated inscriptions of Indonesia. In the second article the Rev. C. Buckle, S. J., Professor at St. Xavier's College, Ranchi, discusses the various legends surrounding the birth of Sita. P. Dupont in the third article studies the beginnings of the Angkorian royalty. L. P. Briggs treats of the genealogy and successors of Sivacharya and the suppression of the great sacerdotal families by Suryavarman I. J. Boisselier contributes a monograph on Ben Mala and the chronology of the monuments of the Ankor Vat style. Next comes an article on "Precisions of the statuary of the Ankor Vat" by the same author. This is followed by "The Harihara of Bakon", also by the same author. H. Deydier gives us "Studies on Budhic and Brahmanic Iconography". P. Paris then furnishes a few dates about the history of the Chinese junk. Ung-Qua studies "A Vietnam text of the XVth century: the Binh Ngo dai-cau". Then comes a study of neolithic station with silex implements at Nhommalat (Cammon, Lao) by E. Saurin. G. Condominas gives a report on an ethnological mission in the Mnong Gar country (mountainous countries of South Indochina).

The bulletin ends with an obituary notice on John Fee Embree; Alfred Meynard and Ung-Qua by L. Malleret and on Doctor Duong-ba-Banh by P. Huard.

X.

Bulletin of the French School of the Far East (1952) gives us :—

An obituary notice of Henri Parmentier, a former head of the Archaeological Department of the French School of the Far East. This is followed by a bibliography of his different publications. The second is a lengthy article on ancient elements of architecture in North Viet-Nam. The third article contains a first instalment of archaeological notes: inscriptions and seals of continental Cambodia. G. Gondominas then provides us with an interesting, but lengthy note, divided into

14 chapters, on the prehistoric lithophone of Ndut Lieng Krak. The fifth article treats of bahnar of the Kontum tribe. It is a contribution to the study of the tribes living in the mountainous parts of South Indo-china. In the sixth article P. Paris gives us a description of the decoration and construction of the kha houses between Lao Bao and Saravane. Causes leading to the deputation of a Burmese political mission to the Court of Cochin-China (1822-1824) and its results, by Sri Krishna Saxena come after this.

Finally in the eighth and last chapter we find a short bibliography.

X.

We have just received information that Father Wilhelm Schmidt, the famous Austrian philologist and anthropologist passed away on the 10th of February, 1954. He was born in Westphalia in 1868, and was one of the founders of the Viennese School of Cultural Anthropology. His famous book, *Handbuch der Methode der Kulturhistorischen Ethnologie* was translated into English in 1939 under the title of *The Culture Historical Method in Ethnology* in 1939.